

American Artisan

Founded 1880

The Warm Air Heating and Sheet Metal Journal

Vol. 98, No. 20

CHICAGO, NOVEMBER 16, 1929

\$2.00 Per Year

HOMES with Zinc Roofs are quite commonplace in Europe, where they have been popular for a great many years... And the soundness of the practice appeals to the American house-owner when he hears of Zinc's permanence and low cost—with no periodical upkeep.

When The New Jersey Zinc Company's Zinc Roofing is used, the contractor's job is easy, because this zinc is known for its superior workability and extreme ductility.

Nor does he have any after-worry—
no patching, no replacing—
no complaints.

The New Jersey Zinc Company's Zinc Roofing



Please send me your booklet on "Standing Seam Zinc Roofing"

Name

Company

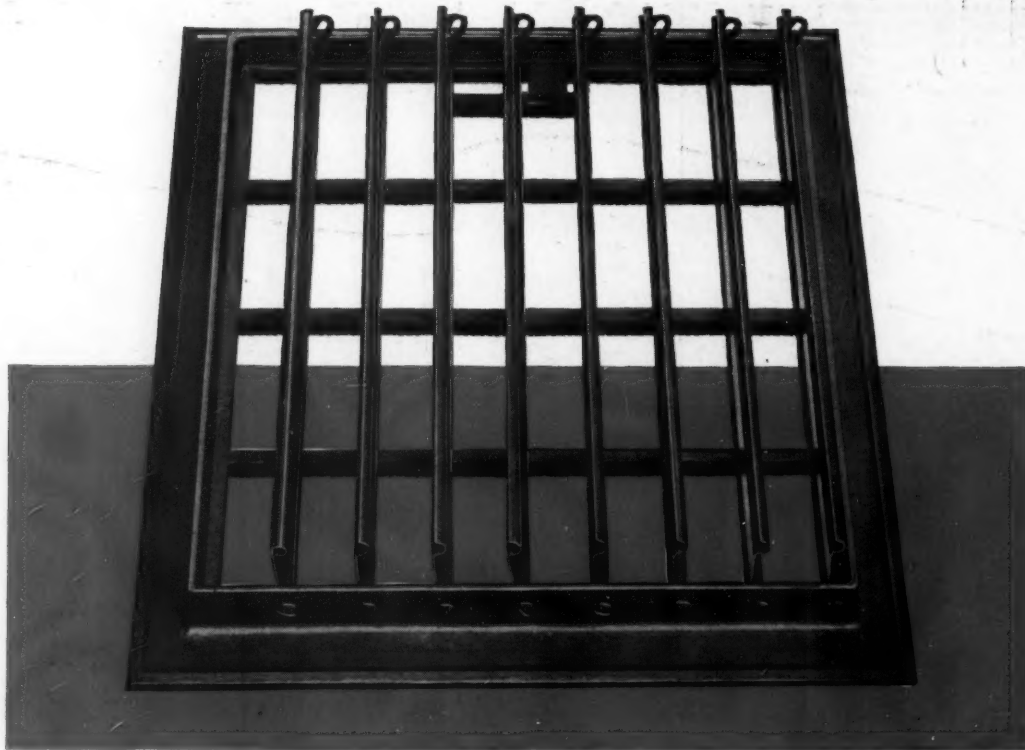
Address

The New Jersey Zinc Sales Company
160 Front Street



New York City

A 629

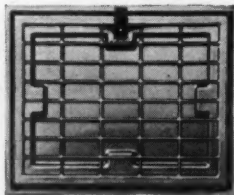


▲ ▲ ▲ ▲ ▲ How much selling can you do with the register you handle? ▲ ▲ ▲ ▲ ▲

A FURNACE has this talking point, and that... efficiency, economy, cleanness. And your installation will be so and so . . . Much better than the usual job—if you can make the customer believe it.

And what of the registers? Can you claim some superiority for the particular type that you will install...or will they be just "registers"?

Registers are as important as any other part of your furnace job...And good registers offer their full share of effective selling arguments.



When you stop to think of it, registers are the very bottle's neck of a heating plant. The furnace and piping cannot be efficient if the registers offer resistance to the passage of the rising warm air. Nor can a good furnace continue to give clean heat if the floor registers trap dust and let it fall into the warm air ducts. You won't have to gloss over these facts if you

use LAMNECK Improved registers on every job. LAMNECKS will not "bottle up" heat in the ducts...they will not form dust traps in the floor. They are more efficient, cleaner, better looking and they make your job easier to sell. In spite of their greater value they don't cost you a cent more.

LAMNECK IMPROVED REGISTERS

If you are not already convinced that LAMNECKS are the cleanest, most efficient and best looking registers on the market, we want to send you a sample floor register. It will prove conclusively the superiority of LAMNECK registers. Use this coupon.

THE W. E. LAMNECK COMPANY

416-436 Dublin Ave., Columbus, Ohio

Gentlemen: I would like to see for myself why Lamneck registers are cleaner and more efficient. Please send me, without obligation, a sample floor register.

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Address _____

City _____

State _____

The Cleaner Heat Series By MIDLAND Will Bring You BETTER PROFITS!



THE "Cleaner Heat Series" is making better profits for Midland dealers everywhere. There are many reasons, such as, the close cooperation and solution of dealers' problems by Midland. Midland dealers everywhere *sell* where others *fail*. Midland dealers *profit* while others *lose*. Are you live and wide awake? Are you looking for opportunity and grasping it? Here is an opportunity to become the leading dealer in your community. Grasp it! Write today!

THE MIDLAND FURNACE CO.
COLUMBUS, OHIO



MIDLAND FURNACES

ALL STEEL ♦♦♦



CLEANER HEAT

THE LINE OF NO REGRETS

-The-Straightest-Line- -to-Increased-Profits-

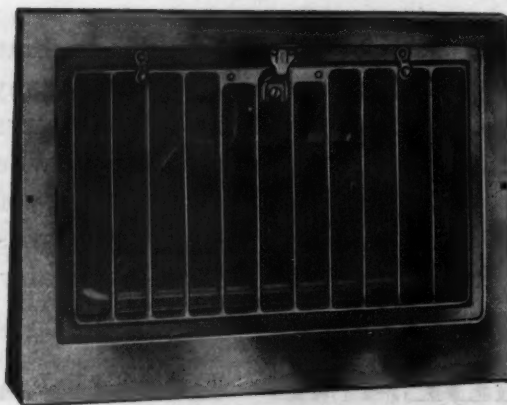
Highest quality, superlative service and efficient design are all factors which enter into making the handling of H & C Registers and Cold Air Faces a consistently profitable procedure.

In addition to representing the best grade of materials and workmanship, assuring satisfied customers, H & C deliveries, from their three modern factories, can now be depended

upon whenever time is an element in your contract.

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For the straightest line to increased profits—always specify the H & C Line in your heating and ventilating work.



No. 172 $\frac{1}{4}$, 8x12, with 78 square inch actual free face opening.

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*The New Sun-
beam Steel Fur-
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and welded,
both; duplex
grates; full
height fire pot.*

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Hundreds of
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one piece radi-
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grates, all verti-
cal joints elim-
inated.*

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FURNACE
COMPANY**
Elyria, Ohio

*A Division of the American Radiator
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SUNBEAM
WARM-AIR HEATING

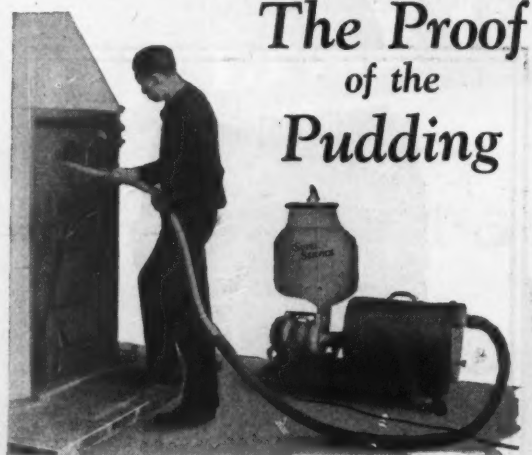
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Please send prices and information
about the complete line of Sunbeam
Warm-Air Furnaces.

NAME

ADDRESS

A-12



The Proof of the Pudding

4 to 6 jobs a day—one man—powerful—light.

THE best thing about selling Super Service Cleaners is knowing they will make our patrons good money.

Wiswell, Clayton, N. Y., writes: "I have 60 cleaning jobs on hand now, and more coming in every day."

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Send for our free **PLAN BOOK** today. Make big profits every month in the year with this new system.

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The Practical Warm Air Register



EASIEST to remove—only a slight pressure of the thumbs against top of frame with grip on face as illustrated is necessary.

No Screws—No Springs
KU-NO is the NEW patented register everybody is praising for its attractive design, simple and No Jar or Vibration locking device and **FREE AIR CAPACITY.**

Write for illustrated circular and prices today. Give us your jobber's name.

KU-NO REGISTER MFG. CO., St. Louis, Mo.

LIQUID ASBESTOS in WHITE or COLORS



BRAND new numbers in attractive fadeless colors in furnace covering, coating, and insulation. **JUST WHAT YOU NEED** to increase your sales. Each attractive installation sells another. Spreads with a brush. Easy to apply—no cutting and fitting—no paste. **TAKES THE PLACE OF ASBESTOS PAPER** on old or new furnaces. Apply over tin, galvanized iron, or paper covered surfaces.

MAKE THE INSTALLATION 100% SEAMLESS with **LIQUID ASBESTOS**, the tailor-made suit for every furnace.

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HELPS INCREASE SALES. A trial order is convincing. There are many reasons why every furnace dealer should know about **LIQUID ASBESTOS.** It's far superior to any other covering.

FIRE AND WATERPROOF

Dealers who are using **LIQUID ASBESTOS** are getting surprising results. Ask for our **SPECIAL DEALERS' PRICES TODAY.**

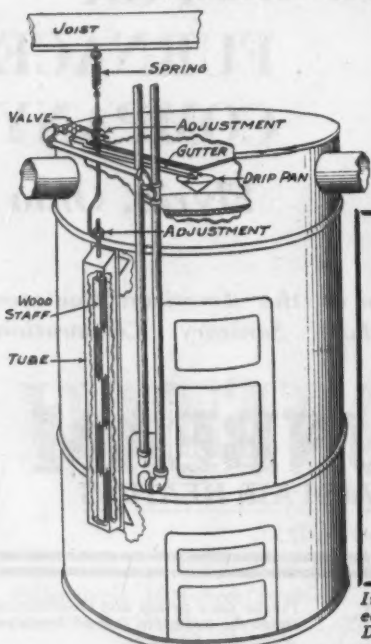
B. & F. MFG. CO.,

Dept. 7,

Des Moines, Iowa

Give your customers perfect humidification with the—

PERFECT AUTOMATIC HUMIDIFIER



**EXTREMELY
SIMPLE--
UNUSUALLY
PRACTICAL--**

In use in hundreds of homes for over four years

HERE is the simplest and most practical automatic humidifier ever devised.

The dryness and humidity of the air regulate the water flow. When the air is dry the drip operates until required moisture is being supplied, then a positive action causes it to stop.

It can be regulated to keep the humidity at any desired degree. The valve closes automatically when fire is out.

Write today for full mechanical details on the Perfect Automatic Humidifier.

It sells easily because it is economical and practical. Dealers are making big profits with it.

The PERFECT HUMIDIFIER COMPANY
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FANNER STOVE AND FURNACE TRIMMINGS

For Quality and Service use Fanner Trimmings. We operate our own Malleable and Gray Iron Foundries.

Write today for latest illustrated catalog which lists and describes our complete line.

THE FANNER MFG. COMPANY
BROOKSIDE PARK CLEVELAND, OHIO

How to make more heating accessory sales

In this issue you will find an interesting, timely feature article which tells how you can increase your sales on warm air heating accessories—

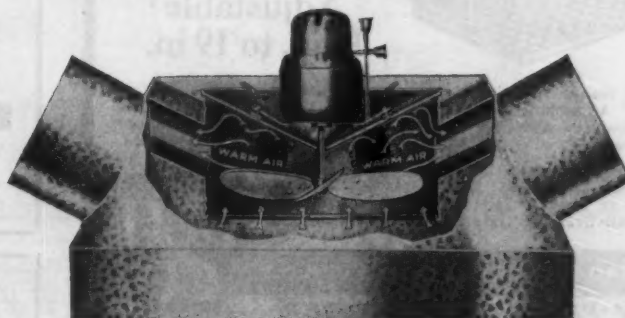
Be sure to read it.

43 JOBBER CARRYING STOCKS IN 67

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SUCCESS HEATER MFG. CO.....
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WESTERN STEEL PRODUCTS CO.,
..... Duluth, Minn.
GEO. F. WHEELLOCK CO., Birm'gh'm, Ala.
WISE FURNACE CO..... Akron, Ohio

This week Ravenna joins the
ever growing Jobber list —



ROBINSON Heat Distributor

NOW warm air heating men who
are customers of The Ravenna
Furnace & Heating Co., Ravenna,
Ohio, can obtain the Robinson
Heat Distributor from that com-
pany.

The increasing demand for fan
heating with the Robinson Heat
Distributor opens up new sources
of supply for this fan almost daily.

The large list of outstanding fur-
nace manufacturers and jobbers
shown on this page is in itself
strong testimony of the efficiency,
quality and selling appeal of the
Robinson Heat Distributor.

The Robinson Heat Distributor is
selling. It's giving the home
owner better, quicker, and more
economical warm air heating. It's
helping warm air heating men
land more business because it
forces attention to the superiori-
ties of warm air heating.

AGAIN WE SAY—display the Robin-
son Heat Distributor in your window
and watch public interest and sales
increase.

Consult the Jobber List—write to the
firm you do business with for full de-
tails, prices and engineering data sheets.

Manufactured by
The A. H. ROBINSON Company
Massillon, Ohio



"GEM" ADJUSTABLE REGISTER SHIELDS

Adjustable
10 in. to 19 in.

One of many valuable features, which make popular sellers of "GEM" Adjustable Register Shields, are their ability to deflect heat down on the floor instead of up at the ceiling. Makes floors safer to play on, and the whole room more comfortable.

For all size registers. "GEM" Floor Shield. Black retails at \$1.25; Dull Brass or Oxidized Copper at \$1.50; "GEM" Wall Shield. Black, 65c; Dull Brass or Oxidized Copper, 75c.

BEH CO

1140 BROADWAY NEW YORK, N.Y.

BUY FROM YOUR JOBBER

Take the Job for WARM AIR and heat that distant room with Hot Water

THE **"Alamo"** LINE with a SMITH'S LITTLE GIANT

of CHAS. SMITH HOT WATER HEATERS

HERE is the hot water heater that makes it possible for you to take warm air heating jobs with hard-to-heat rooms.

It is made in 4 sizes—the larger sizes for heating rooms when connected up to Hot Water Radiators.

Size 3 is 12 in. high, 12 inches wide with capacity for 150 ft. radiation.

Write for prices and special circular today.

Made by the makers of The Alamo Cross, Geyser and Crescent Hot Water Heaters.

ALAMO HEATER CO.

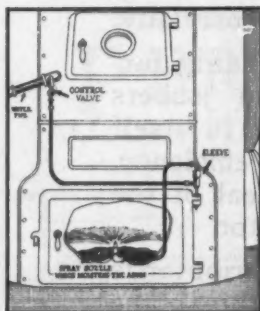
6143 Wentworth Avenue
CHICAGO, ILLINOIS



They fit all furnaces

FURNACE MANUFACTURERS AND JOBBERS

Give your trade this extra feature
FURNACE DUST ELIMINATOR



A NEW patented appliance that makes ash removing a clean job. Nozzle emits a fine spray of moisture which settles dust. Control valve conveniently located. Sleeve connection allows nozzle to swing out of the way with door. First quality materials throughout. Practical, efficient, and inexpensive.

Write for full information and prices today.

DUSTLESS ASH COMPANY, MUSKEGON, MICH.

Established
1902



CHICAGO FURNACE PIPE AND FITTINGS

KNOW how good furnace pipe can be—write for details and prices today.

CHICAGO FURNACE SUPPLY CO.
1276-78-80-82 Clybourn Avenue
CHICAGO, ILLINOIS



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WE MANUFACTURE A COMPLETE LINE OF BOLT PRODUCTS, INCLUDING STOVE BOLTS, CARRIAGE BOLTS, MACHINE BOLTS, LAG BOLTS, NUTS, COTTER PINS, ETC. ALSO STOVE RODS, SMALL RIVETS AND HINGE PINS. CATALOG ON REQUEST.

THE LAMSON & SESSIONS CO.
THE KIRK-LATTY CO.
1871 W. 85th St. Cleveland, O.




McILVAINE OIL BURNER
Listed by Underwriters

Adaptable to warm-air furnaces because the McILVAINE System of continuous flame insures no cracking or burning of fire pots, but produces even, dependable heat.

Not an Intermittent Burner
DEALERS: Write for information today.
McILVAINE BURNER CORP., Dept. A, 747 Custer Ave., Evanston, Ill.

PATTERNS FOR STOVES AND HEATERS

THE CLEVELAND CASTINGS PATTERN COMPANY
CLEVELAND, OHIO

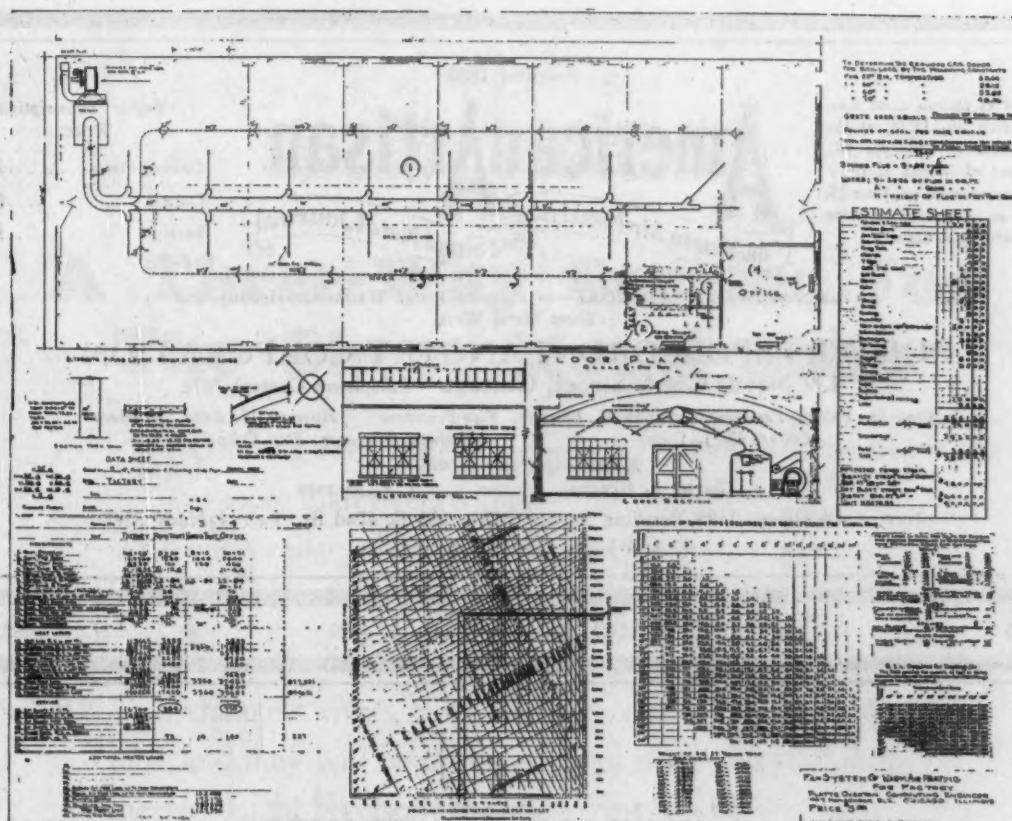
IRON AND WOOD STOVE PATTERNS
QUINCY PATTERN COMPANY
QUINCY, ILLINOIS

PATTERNS
FOR STOVES AND HEATERS FIRST-CLASS IN WOOD and IRON
VEDDER PATTERN WORKS ESTABLISHED 1835 **TROY, N. Y.**

SERVICE

American Artisan receives thousands of queries yearly. If there is anything used in your business which you can't find advertised or listed in the Buyers' Directory of American Artisan, write to our *Notes and Queries Department*. Give all the details you can and we will tell you where to obtain the materials or services you want.

AMERICAN ARTISAN



NOW with this help you can handle the BIG heating contracts

IF you are a live progressive warm air heating and sheet metal contractor and if you have been passing up the Big Fan Blast Warm Air Heating jobs because you lacked the proper engineering information to tackle this type of job, this service is just what you have been waiting for.

This service, which consists of complete plans and engineering information, won't make you an engineer, but if you know how to read plans, charts, graphs, and tables and know how to figure grate areas, heat losses, pipe sizes, etc., when you are shown how with complete data and correct formula, you will realize the great value of this information and be able to use it profitably.

The plan illustrated above (greatly reduced in size) is that of a Fan Blast Warm Air Heating installation in a factory. All the information necessary for you to figure a similar installation for a larger or smaller factory is given right on the full size plan.

Plans, specifications, material and cost estimates, instruction sheets, description of system design, etc., showing installations in Church, School, Theatre, Garage and Residence are also available. Each plan is complete with charts, graphs, tables and heat loss data sheet. Methods for sizing ducts, mains and branches are given together with data for determining grate area, smoke flue area, fan and motor requirements.

ENGINEERING PLANS for FAN BLAST Warm Air Heating and Ventilating

THESE plans and accompanying data were prepared by a well known Fan Blast Warm Air Heating and Ventilating Engineer. Live contractors who can apply this information can use it to land the big jobs that come up in their community. The Schools, Churches, Factories, etc., in your town should be heated by Warm Air and these plans open the way for you to get the business.

Send the coupon for further information.

Book Department

AMERICAN ARTISAN
139 N. Clark Street Chicago, Ill.

**AMERICAN
ARTISAN**
139 N. Clark St.
Chicago, Ill

Send me more information and prices of
PLANS for FAN BLAST
WARM AIR HEATING AND
VENTILATING.

Name
Address
Town..... State.....

Mention AMERICAN ARTISAN in your reply—Thank you!

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Founded 1880

American Artisan

The Warm Air Heating and Sheet Metal Journal

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PORTER - SPOFFORD - LANGTRY CORPORATION

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A Three-Way Service For The Sheet Metal Shop

- ① Offering one of the broadest selection of prime sheets—more than twenty kinds—for immediate shipment.

The wide range of sizes and large quantities carried at Ryerson plants assure immediate shipment on every order.

- ② You can include on the one order the bars, angles, channels, rivets, bolts, and nuts, etc., needed on many jobs, and they will be delivered from stock along with the sheets. Eight Ryerson plants, carrying the world's largest and most diversified steel stocks, assure prompt delivery of every item.

- ③ In addition to the above the Ryerson Machinery division will meet your requirements on sheet metal working tools. Beaders, turning machines, snips, and all other tools—sold under the Ryerson guarantee.

Use this three-way service on all your jobs. Immediate shipment, combining of orders and office work save considerable time and money.

JOSEPH T. RYERSON & SON INC.

Plants: Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Cleveland, Buffalo, Boston, Jersey City

Representation in: Minneapolis, Rockford, Kansas City, Tulsa, Newark, New York, Denver, Los Angeles, San Francisco

RYERSON

STEEL - SERVICE

NOW IS A **GOOD TIME** **TO START—**

MANY dealers would be making much more profit but for the fact they put off starting to get it.

If you are not using the sales method outlined below you are doing worse than gambling—you're playing a *positively losing game*. So even if you think it can't be done gamble on losing the next sale *this way*.

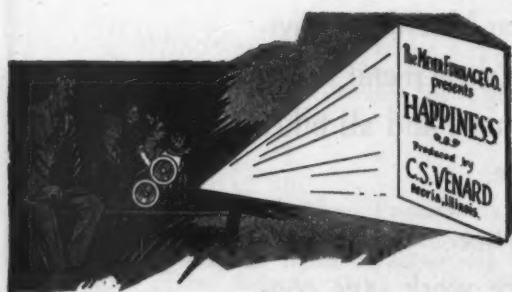
Be attentive enough to show keen interest in serving the prospect's needs but sell him on *warm air heating*—(the furnace comes in later).

Show him the Standard Code—explain a few of the many facts you have to take into consideration *to heat his home properly*.

Talk comfortable heating—adequate heat capacity—heat loss through windows and walls, etc. Show him that *you* know your business. Explain the importance of proper location of furnace, registers and cold air returns. Heating his home *is an important item* to him but it is very likely he doesn't realize it from all the angles which automatically come to your mind.

Your business is heating; he expects you to convince him that you know your business and if you can do that he will want *you* to do the job and he will want the kind of furnace you know he ought to have—a *good high grade furnace*. He will expect you to handle just such a furnace.

**Weir dealers sell WARM AIR HEATING—
BETTER warm air heating with the Weir.**



WEIR dealers are given practical and consistent sales cooperation. Ask about the Weir moving picture film "Happiness", the motion picture you show to your prospective customers **RIGHT IN THEIR HOMES.**

**THE MEYER FURNACE CO.
PEORIA-ILLINOIS**

**The
Original
Steel Furnace
Now In Its
Forty-Eighth
Year**

WEIR

**Made by
The Founders
of the
Steel
Furnace
Industry**



American Artisan

The Warm Air Heating and Sheet Metal Journal



Vol. 98

CHICAGO, NOVEMBER 16, 1929

No. 20

Why Scientific Selling

Reasons for Urgent Necessity for Its Employment in Sheet Metal and Warm Air Heating Industries

IN THE warm air heating and sheet metal industries, insofar as the dealer is concerned, there is a deplorable lack of understanding of the urgent necessity for the immediate institution and employment of scientific merchandising methods.

There is nothing finer or that holds greater possibility for the production of health and comfort than a warm air heating system properly installed, and yet how are the majority of these systems being sold today? On a price basis.

PRICE rules the roost. And why? Simply because the man who is charged with the responsibility of engineering these units into the basements of the homes which they are to serve has for the most part fallen down on the job of proper selling. He doesn't know how to sell. Consequently to beat the other fellow's price is his goal. There are exceptions to whom this indictment does not apply, of course, but as a general rule the retail warm air heating establishment as we know it today is not only failing in its function, but is actually an eyesore.

How long is it going to take the warm air heating and the sheet metal industry to wake up to the fact that they have got a merchandising problem? How long are the men in those industries going to sit idly by and watch the encroach-

ments of other groups; see them usurp what is rightfully that of the warm air and sheet metal industries? Are they going to wait until the horse is stolen before they lock the barn door? Such would appear to be the case from the feeble effort that is being put forth to correct that phase of the industry's shortcomings. Let me try to show how the industry looks to the public.

SUPPOSE you are a prospect looking for heating service. You turn to a telephone directory and in the advertising section you find the business houses listed. You pick out the name of some warm air furnace dealer listed there, then call on the company at the address given.

Your first impression—the one that counts most—is, in nine cases out of ten, that you must have made a mistake. You look again at the number and then you discover the name of the company which you are seeking.

You are now, in all probability, down in the back alley of the most disreputable part of town. The shop you have found is the dirtiest, most dilapidated looking place you have ever seen.

NOW let me ask: In your present frame of mind how much enthusiasm are you, as a prospective purchaser of warm air heating equipment, going to manifest in that type of system? How much con-

fidence are you going to place in the ability of the man who approaches you as you enter to do the job of installing your job right in the event that you do decide to buy? I know at once that your answer is going to be a polite silence. You are going to invent an excuse to get out into the fresh air and get away from the disgraceful looking place you got into by mistake.

If furnace installers and sheet metal men could only be brought in some way to see themselves and their business establishments from the customer's viewpoint they would at once understand why it is imperative that they change their selling tactics to conform to those employed by dealers in other lines of industry. They would then see that in order to attract the dollars to their industry they have got to make an extraordinary appeal.

THE "show me" attitude in the customer was never stronger than it is today.

On other pages of this issue we show how one warm air furnace dealer has brought his window and salesroom up to a par with those of every other merchant in his city. He has found that it pays him to maintain this display.

Why not read what this man has to say, see what he has done about it, and then resolve to do likewise? Better do it now; next year may be too late.

TIE UP Your Window

With News Propaganda

THE warm air heating industry is confronted today with a merchandising problem more acute than it ever has been before. Competitive industries are making serious inroads upon the legitimate business of that industry and for no other reason than that they are using every means possible to influence the public in their direction by means of clever advertising—the hidden radiator is an example.

When you stop to analyze the warm air heating system, comparing the real merit it has with competitive systems, you begin to appreciate in some small degree the vast number of natural selling points it has. You also appreciate in a much greater degree how fast asleep the entire warm air heating industry is for not capitalizing to the fullest extent upon these natural selling points. Any other industry with one-fourth the opportunity would have had the entire civilized population of the earth sold on warm air heating, humidification, health and comfort long since.

In fact so great are the opportunities and so outstanding is the natural merit of the system that the daily newspapers cannot avoid mentioning it on their building pages in their effort to give their readers reliable information on the causes for dry air in the home. In the Chicago Sunday Tribune for November 10

HAVE HUMIDITY AT PROPER POINT IN COLD WEATHER

Too Dry Air Means Illness,
Ruined Furniture.

BY LOUISE BARGELT.
[Home Builders Editor.]

A "little knowledge" can cause a lot of harm sometimes. It is, in truth, a platitude that we have told us since the immemorial, dangerous

HOT AIR HEATING SYSTEM WHICH ALSO HUMIDIFIES

Operation Is Automatic
and "Foolproof."

BY HOMER GRANT.

The need for automatic humidification in a warm air heating plant has recently been met by some manufacturers of such heating systems.

For a long time warm air furnaces have been equipped with some form of water pan in the central heating system.

Tests have shown that these pans are capable of producing small amounts of air moisture, but that they are inadequate to the big humidifying jobs required by larger homes.

Naturally, like all types of humidifiers which contain vessels hand filled with water, they must be frequently filled to be of any value. The moment they are allowed to go dry, they are worthless.

Attached to Plumbing.

As a part of the equipment on a late type of warm air heating plant is a device attached to the plumbing supply pipes. This is turned on at the beginning of the heating season and is forgotten until spring, when it introduces

the subject of humidity and its connection with the warm air heating system is given a column and a half. Two different writers have treated the subject from all angles and in their articles these writers have been unstinted in calling attention to the humidifying device employed in conjunction with the warm air heating system. The fact that steam or hot water appliances are not mentioned in either of these articles proves beyond a question of doubt that the warm air heating system has the superior merit. There is no way that proper humidification can be secured with the steam or hot water system, consequently no mention could be made of them.

Now, as to how warm air furnace installers could take advantage of publicity of this kind. The Chicago Sunday Tribune reaches an effective area of at least 150 miles. People—home owners—are reading and absorbing the information given in those two articles and similar others which appear from time to time. The idea sounds reasonable to the reader. His favorite newspaper suggests it, therefore there must be something to it. He resolves to investigate the first chance he gets. Now, where the furnace dealer is on the lookout for such helps as this, what happens?

The next morning on his way to work Mr. Home-owner's attention is attracted to a window showing some sort of heating apparatus. A small copper device is also shown similar to the one described in the article he read on humidification. Streamers run from the device to a page from the newspaper and he finds upon closer attention that it is the identical paper and article that

Displays



Here Is a Model Window Display Exemplifying the Idea Outlined in Our Article Herewith.

he had been reading the day before. He suddenly comes to a realization that there is the very thing he had been reading about and he can secure further information on the subject inside.

The first opportunity he gets he is going to go in, if in fact he does not enter at once and have a talk with the warm air heating specialist. That is what is bound to happen if the warm air heating man is onto his job. That is perfectly legitimate and scientific merchandising.

On the other hand, if no dealer in that particular man's neighborhood is awake to the possibilities of such priceless publicity as that shown in the accompanying reproductions, the man goes about his daily routine of business and in the natural course of events he forgets all about the article he read. In a day or two it is gone completely from his memory. The chance that he will recall it at some later date and start out on an investigation of his own are very slim indeed. Too many other things crowd in upon his time.

It doesn't require a great deal of added effort to take advantage of such publicity. In the case of the Chicago Sunday Tribune, for instance, it is on the streets in the city at 9 o'clock, Saturday night, and copies can be had throughout the entire area in which it circulates early Sunday morning. It would be an easy matter to get early copies, go through them, and if anything is found of the sort described here, to arrange a window so as to get the full effect of the Sunday promenaders. Such merchandising activity as this could not fail to be valuable to the furnace installer who has a shop on the main street in his community. Then, too, by getting out early with such a display he would have the jump on his competitors.

In one of the accompanying illustrations we have described graphically the idea we have in mind with regard to how the dealer can take advantage of newspaper articles. We show a window display with a warm air furnace at either end. In the center, raised somewhat from

the floor, are placed two or three humidifiers. Streamers are attached to these and running to the newspaper page containing the story on humidification that is pasted to the window. Streamers are also run from the humidifier to its location on the furnace. A placard calling attention to the real comfort to be obtained from proper humidification, strategically placed in the window, will also be found of value. There are any number of ways in which the thing could be worked out, consequently the actual arrangement would have to be left to the discretion of the furnace installer himself.

The idea we are trying to convey here, however, is that such publicity as that reproduced in the news columns is far too valuable to the furnace installer to be ignored completely by him. It is in just such cases as this where the window display shows its real merit. The man who has a good window has little difficulty in tying up with publicity of the kind outlined. A few mo-

(Continued on Page 106)

Why

Direct

Succeed Go in the Warm Air Fu

REGARDLESS of how successful the chain store or direct factory selling has been in retailing generally, it can never triumph over the factory to dealer, dealer to ultimate user route in the furnace or sheet metal industry.

J. A. Harris is the authority for that statement. Mr. Harris is one of the partners comprising the South Bend Spark Arrester Company, 504 East Sample Street, South Bend, Indiana, a graduate of Wabash College, whose company does perhaps 50% or more of the warm air heating business in South Bend, and a man who has perhaps had more experience in competing with direct factory branches in the warm air heating business than almost anyone else in that territory.

"The reason I make that statement," said Mr. Harris, "is that there exists a fundamental difference between retailing the small

personal salesmanship to retail a screw-driver or a monkey wrench. The customer pays his money and takes the article away. The demand for that article may originate in any one of several ways.

"With the sale of a warm air heating system or sheet metal products, however, the furnace installer is selling a service, not just a product. The fact that he has been in business in his community for a long time aids him in selling his products and services as much if not more than any other advertising that he does. If he is conducting his business properly, he is constantly building up a satisfied customer list. It is designated in his books as good will and he makes a conscientious effort to increase it as time goes on. There is no substitute for personal contact. The head

of the business is a member of the community. He participates in the community life, helps pay the community expenses, discharges his civic duty the way any other citizen does and is permanently located.

"On the other hand, the direct factory branch in the city must depend for its existence upon the efforts of a man that is sent into the com-

munity. We have one man here now managing one of the direct factory branches that came here from some city down in New England.

"The home office figures that the branch manager in this town ought to be able to dispose of a certain quota of units. Well, what happens? Here is this total stranger placed in the community to sell a certain specified number of heating units. He goes to work, uses any and every method of persuasion he can devise without actually being jailed to dispose of his quota of furnaces.

"The matter of installing these furnaces so that they will prove to be service giving heating units doesn't worry our friend very much, because his main idea is to sell as many as he can. His entire thought is concentrated on sales. It has to be. Installation is a secondary consideration with him. Whereas, with the permanent dealer installation is the most important part of the whole, because his future sales and growth of business depend entirely upon his making a satisfied customer of each and every purchaser.

"Here in South Bend we have a branch house of practically every furnace manufacturer that is now attempting the direct selling idea and we have had all the others. I have watched them all come and some of them go. The result is always the same. It can't be different when the basis upon which they attempt to sell remains the same.

"IN THE merchandising of a warm air heating system, the furnace installer is selling a service as well as a product. Skill and engineering ability play as much of a part of the sale as the product itself. Whether the customer gets satisfaction or not depends almost entirely upon whether the system he buys is properly installed. The rewards of branch managership are not usually commensurate with those obtaining in a well-established, efficiently conducted individual business.

articles and the marketing of products such as the warm air heating unit or any of the sheet metal items. It doesn't require a great deal of

Selling Cannot Generally Furnace Industry

"If I sell a warm air heating plant to Bill Jones over here, my main talking point is satisfactory service, adequate heat, fuel consumption effected to the greatest advantage. That implies proper design and proper engineering service. Now, in order to insure that Bill is not going to be calling me back for service, I've got to engineer that job in right in the first place. I've got to take into consideration the fact that every job is a separate and distinct unit, with heating requirements that are not exactly like any other job. In order to fulfill those requirements, I've got to use my experienced judgment on each installation individually. Take two bungalows, for instance, that are supposedly identical in construction. They have the same number of rooms of equal size and everything otherwise apparently alike. The chances are ten to one that their heating requirements will not be the same. But it is equally certain that the direct factory branch manager will shove in the same size and type of heating system in both houses, installed according to layout number so and so for a house of so many rooms and bungalow type construction.

"Even though the exterior of a house appears to be the same in every respect to some other dwelling nearby, that does not prove that their construction is alike. One owner may have been short of money at the time of building and may have for that reason skimmed

on the material used. As far as the appearance of the house is concerned it makes little difference, but when you guarantee to heat a dwelling to a certain temperature during zero weather, you've pretty nearly got to know what the construction of the house is so that you can provide a system large enough to make good the heat losses. If the builder has done a good job, your heat loss is going to be less than where the builder was trying to economize everywhere he could. Those are all things that must be taken into consideration by the installer who is endeavoring to make his business permanent. But they are given very little thought by the factory branch manager.

"The whole thing revolves around the fact that every man who has ability and talent for business would rather be in business for himself than a branch manager for some one else. Therefore the calibre of man it is possible for the factory to hire as branch manager is not always on a par with that of the man who is in business for himself and who has the expectation of a legitimate reward for adequate service.

"I am thoroughly satisfied that

the factory branch method of merchandising warm air furnaces is not practical. The chain store idea can never be applied with any degree of

WHERE the main effort in merchandising a warm air heating system is concentrated on sales, as is the case in direct selling, with installation made a secondary factor in the transaction, there is bound to spring up dissatisfaction, because of the inefficient service that will be forthcoming from the unit improperly installed. Each installation is an individual proposition and, therefore, rule of thumb standard or type installation methods cannot be made to work. Servicing is also a factor.

success in warm air heating, primarily because each job is a unit in itself and its requirements are strictly individual, secondarily because it is not possible to get the right kind of men to act as branch managers. The entire plan is so worked out that the main effort must be concentrated on sales. Sales are necessary, of course, but installation must be such as to guarantee satisfaction. Where that latter condition is attained, success will follow, but not otherwise:

"In spite of the fact that we have steady increase from year to year. The reason for that is just as I have outlined it above.

a branch of every manufacturer that is attempting to operate under the direct selling plan in our town. our own business is experiencing a

"We have recently taken on the Nu-Way oil burner and are going into that phase of warm air heating.

We stood on the side lines of oil heating for a long time watching developments before entering it. We were skeptical, as every one who has a business reputation to sustain should be, and it was only after we were thoroughly grounded in the fundamentals of oil heating that we decided to enter. We have an expert in our oil heating department. He is a graduate engineer and has given the subject very thorough study. That is the only logical basis to employ, especially in the oil burner field where potential chance for grief is very great.

"We are also experiencing a marked increase in the demand for forced air.

"You see, we have a satisfied customer list of some 8,000 names, in addition to an aggressive new business producing policy, and we surely are kept busy here. As a matter of fact, our business has grown so much that we have been compelled to buy first this building and then that in order to keep our activities properly housed, but now the time has come when it is apparent that we will have to build a new and modern plant, so as to provide adequate work shops and office space. And when we do build, which will probably be some time early next year, you may rest assured that we are going to have a show room and window display that will be second to none.

No doubt many folks have wondered just how the company came to have a name that is so foreign to anything connected with the warm air heating business. It is an interesting story. Perhaps 40 or more years ago the senior Harris invented a spark arrester for use on the smoke stacks of threshing machine engines, saw mill smoke stacks and the like. Sheet metal was used in large quantities in the manufacture of these spark arresters. Consequently a full complement of sheet metal working tools was included in the equipment of the company. As time went on the demand for the spark arrester decreased with the introduction of the gasoline driven motor, the activities of the company,

therefore, were shifted to those of sheet metal contracting. So well and favorably was the company known that the name has remained long after the original activity of the company has been discontinued. A branch of the company, however, is still manufacturing the original product in the lumbering section of the state of Washington. The senior Harris, however, died a few years ago after establishing the branch of the company.

Bureau of Standards Simplification Committees Reaffirm Sheet Steel Simplification

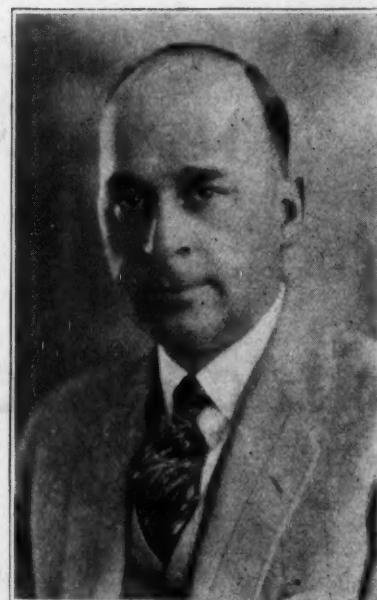
The Division of Simplified Practice of the Bureau of Standards, Department of Commerce, has just announced that the following simplified practice recommendations have been reaffirmed without change by their respective standing committees for another year: S. P. R. No. 28—Sheet Steel; S. P. R. No. 29—Eaves Trough and Conductor Pipe; S. P. R. No. 30—Roofing Ternes, and S. P. R. No. 62—Metallic Cartridges.

The simplified practice recommendation on Sheet Steel effected a reduction in variety of stock sizes from 1,819 to 261, or 85 per cent. The Eaves Trough and Conductor Pipe recommendation was instrumental in reducing varieties from 21 to 16, or 24 per cent. Due to the recommendation on Roofing Ternes, weights and thicknesses were reduced from 9 to 7, or 22 per cent, while the Metallic Cartridge recommendation reduced the number of varieties from 348 to 256, or 26 per cent.

Surveys of production, conducted prior to the recent Roofing Terne and Metallic Cartridge revision meetings, indicated the degree of adherence to these recommendations to be nearly 100 per cent.

Allshul and Gedney to Manage Camden and Buffalo Ryerson Plants

Arthur C. Allshul, formerly manager of the Buffalo plant of Joseph T. Ryerson & Son, Inc., has been



Clarence C. Gedney

appointed manager of their new unit in the Philadelphia district.

As previously announced, the Ryerson Company has purchased the business, equipment and good will of the Penn-Jersey Steel Company at Camden, New Jersey, and are also making other arrangements to provide facilities to meet the requirements of the trade in the Philadelphia metropolitan district.

Mr. Clarence S. Gedney has been appointed manager of the Buffalo plant, succeeding Arthur C. Allshul. Mr. Gedney has been connected for many years with the specialty sales division of the Ryerson business in the Chicago territory.



Arthur C. Allshul

CONTINUITY— PITHINESS—

Chief Requisites in Planning Advertising

Says Harry Rhodes

SUCCESS in the sale of warm air heating service and equipment is 75 per cent personality, according to Harry Rhodes, 350 South Division Street, Grand Rapids, Michigan. Therefore it behooves every young man who aspires to success in that industry to give his business a definite personality and so arrange and conduct the affairs of that business that its personality will become favorably known and felt in the community.

Mr. Rhodes has been in business in his community for 36 years, and during that time he has had ample opportunity to test various plans and to formulate policies that not only bring results, but build good will as well. Some of these business getting ideas if put into practice by them may assist others to become successful in their own communities in turn.

In the first place Mr. Rhodes believes

that warm air heating service can be scientifically merchandised; that is, that people will respond to the warm air heating contractor's plea for a share of their dollars in the same manner and degree that they respond to the inducement of the automobile, radio and washing machine salesman. But the reason why they are not doing it today is that the warm air heating contractor has not solicited their business in

the proper manner. For the most part he has not had the courage to make an investment in display service commensurate with that of the competing salesmen.

Mr. Rhodes has one of the finest warm air heating salesrooms in the country (shown in one of the accompanying illustrations). He was forced into building it more or less by circumstance. Some time ago the city of Grand Rapids decided to widen Division Street. This necessitated cutting off considerable of Mr. Rhodes' frontage.

Nothing daunted, he took advantage of the opportunity and remodeled the entire front portion of his shop, arranging for an adequate display.

I said it is one of the finest warm air furnace display rooms in the country. It is easily that. The floor is completely covered with a thick, soft, chenille rug of the finest quality. The plate glass win-

Come with me
on my tour of investigation. I am going to build a home and I want to put in the best heating plant I can find.

The Warm Air Furnace
I find, is considered the best heating plant for a home. Now let's find the best warm air furnace.
Phone 6-6958

A Cast Iron Furnace
I find has many joints. joints are full. make...

1/8" to the Foot
Cast iron expands one-eighth.

Boiler Plate
I find, is a better conductor.

Fire Brick
To line the firepot of a boiler furnace. The boiler furnace is beginning to appear.

Two Kinds of Metals
are used in making furnaces: Cast iron and boiler plate. Which is best? Let's find out.
Phone 6-6958

Rhodes BOILER PLATE BRICK LINED **Furnace**

Series of Newspaper Advertisements Used by Harry Rhodes Exemplifying the Idea of Continuity in Advertising.

WINDOW DISPLAYS A Essential in Merchandising WARM AIR

"There is a definite science involved in the merchandising of warm air heating service and the furnace installer who does not recognize that fact is neglecting to use an important ally in his selling effort"

dow is clear and always kept clean. The company name is placed on the window where it is easily seen, but not so as to obscure the view of the articles. A handsome floor lamp is placed on either side of the window and lighted at night. Here and there a plant has been placed, and other small articles put in, in order, as Mr. Rhodes expressed it, to get away as much as possible from the stereotyped showroom display.

Comfortable chairs are so placed that the prospect can be seated and at the same time view the furnace at ease. The whole plan here is to carry out as completely as possible the idea of comfort, cleanliness, and convenience—the thing the warm air heating system is supposed to typify. "And why not?" says Harry. "Haven't you ever seen automobiles displayed on Oriental rugs? Of course you have."

A clock hangs on the wall. It also has a light over it so as to make the vision clear—little eye catchers that do the trick.

The main display is made up of four furnaces. These are so arranged that the customer can view both their front and back from either the street or the inside. This makes selling easy. The comfortable chairs are so arranged that the prospect seated therein can look

right into the lighted firebox of the furnace. And the fact that he is seated in a comfortable chair while exposed to the sales talk about comfort and convenience goes a long way toward bringing conviction.

"You'd be surprised what a help attention to those small details can be," said Harry.

One furnace is displayed without the casing, and under the casing ring of this a metal sheet painted to represent the cement floor of the basement has been placed. This is just one factor in the complete sales plan inaugurated by Mr. Rhodes. Here's another. A list of users of the Rhodes furnace also hangs in the window, giving the names and addresses.

Here's a selling point which few people give much consideration, but it is important nevertheless. Mr. Rhodes says that a third person in the salesroom is almost

always a disconcerting factor. Most people do not like to share their confidences with a third person. They



Window Display of Harry Rhodes, Grand Rapids, Michigan, Showing V. Are Employed. This is What is Known as Using Correct Merchandising

AND SHOW ROOMS

Merchandising

FOR HEATING

are reticent about discussing business matters with a third person present. Particularly is this true

where the customer is asking for a time payment proposition. Therefore in order to remove the customer from the presence of the disconcerting element, Mr. Rhodes has had arranged in the back of his office a "den" or confidential room that is attractively fitted up to make it look as homey and comfortable as possible. Two valuable paintings by Alten, a Grand Rapids painter, who won national fame, adorn the walls.

The walls themselves are attractively decorated, and the floor is carpeted. The furniture consists of a table, a love seat, two chairs and a book rack. All business appurtenances are removed. Here the customer can talk with perfect assurance of not being overheard.

"This room has been a great asset to our business," said Mr. Rhodes. Mr. Rhodes' secretary, Miss Chollar, is given credit for

"The warm air heating industry is making progress, but it cannot come into the popularity it deserves until the public is awakened to the superior merit of the system—until installers use correct merchandising ideas"

the arrangement of the "den" and the window display.

"The thing that we have tried to do here," said Mr. Rhodes, "is to have the spirit of friendliness pervade our entire organization. We have done this not alone with our customers, but with our workmen as well. We find that it pays.

"You see, we operate in a rather peculiar way. We run a semi-jobbing and retailing business and, of course, that requires the utmost in diplomacy. We have several associate dealers who handle our furnaces under their own name, but they all bring their customers here for display purposes. We bid on jobs, too, but we do not compete in any way with our associate dealers. Our place is their headquarters.

"I believe that continuity in advertising is the only successful method to employ in using newspaper space.

"Here's a new wrinkle along that line that I have just put into operation. It's been running for several weeks now.

"Along this line I want to show you a series of advertisements that have been running continuously in the Grand Rapids daily papers. I believe this series of ads is going to do a lot toward awakening the Grand Rapids public to the true



Showing What Can be Done if a Little Thought and Effort Merchandising Methods in Selling Warm Air Heating Service.

merit inherent in the warm air heating system. You will see that they are based primarily upon the idea of continuity. I've got to have something short, easily read and remembered, something distinctive that will impress itself upon the mind of the reader. In this story so far as I have gone with it, I have dwelt upon the superior qualities of warm air heating and at the same time I have made it plain where more detailed information can be had on warm air heating."

The type of this advertising can be seen in the accompanying illustrations, which shows the series as far as it has gone to date.

The man pictured in the ad is supposed to represent just any ordinary intelligent, prosperous citizen who is about to build a house. To date he has given no thought to the problem of heating that house, and the object of the series is to arouse his interest sufficiently in warm

air heating to cause him to seek further information. Each ad gives a little more information regarding the furnace. Each message is a complete entity but at the same time a part of an entire series. It is an excellent idea and well executed so far as it goes.

But if I may be so bold as to offer a criticism on the series, I would suggest that instead of changing the title of each ad, that some definite slogan like "Modern Heat" or "Certified Warmth," "Healthy Heat" be used and the ad designed to sell the Grand Rapids public on the idea of health and comfort to be derived from the use of a warm air heating system. Because after all

that is what folks are interested in today more than any other one thing. Give them something that will cause the question to arise in their minds, "Well, what is this modern heat? How can that give you health and comfort?"

Any ad that provokes questions of that sort is bound to be successful, because when people learn of the merit of a warm air heating system their enthusiasm for it will increase. The type of unit they buy isn't going to cut such a big factor with

paper of about 25 cities in the United States. Therefore any dealer who has such a plan of his own will be able to cash in on the national advertising with double the value.

Every dealer should watch closely for announcements of the proposition. Whatever action is taken on it at the Columbus convention will appear in the December 7th issue of AMERICAN ARTISAN. It is important that you watch for the action taken by the National Association, because it means much to you if the project does go through.

From the foregoing it can be readily seen that Mr. Rhodes has worked out a very comprehensive merchandising plan. He has taken everything into consideration. His place of business is all that it should be. His windows are attractive and a credit to the industry. His spirit and that of his entire organization is what it should be—that of friendliness and a desire to be of real service to



The "Den" Where Harry Rhodes Takes His Customers So That They Can Talk in Perfect Confidence About Their Heating Problems.

them once they are sold on the idea. By that I mean that the details of your particular system can be explained in a personal interview. The big thing is selling them the idea of using warm air heating in such a way that they will seek further information from you on it.

Right along that line the National Warm Air Heating Association now has under consideration an advertising project which they hope to bring up for consideration at their December meeting. This plan will promulgate some such combined advertising proposition that will call attention to the "Modern Heat" or something similar. This advertising plan if adopted will use the daily

all comers. And last of all, the proof of the pudding is in the eating thereof. It pays. What better criterion is there?

Like all wise men, Mr. Rhodes does not confine his entire effort to warm air heating. The business is too seasonal for that. To fill in during the slack period in the furnace industry he manufactures a line of pruning shears. The two businesses, he finds, dovetail very nicely together, because when one is busy the other is slack and vice versa.

However, too much cannot be said in praise of the wonderful window and display room that Harry has had built. Let his enthusiasm and the wisdom he has displayed spread.

WHO'S WHO, WHERE!

SAN FRANCISCO, CAL.—The Empire Heating Co. has engaged in business at 6630 Mission Street.

LEWISTON, IDA.—The Thomas Sheet Metal Works has been opened by W. J. and R. B. Thomas.

SEATTLE, WASH.—The Model Equipment Co. has been incorporated, with a capital of \$10,000, to handle heating equipment of various kinds, by C. M. Graham and N. H. Clark.

Finlay & Robb, 90 Lenora Street, have the sheet metal and roofing contract for the storage building of the University of Washington.

PORTLAND, ORE.—Ray F. Becker, 146 Page Street, has been awarded the roofing and sheet metal contract for airport buildings at the Swan Island Airport.

Schidlofski Brothers, 1408 4th Avenue, are evidently very busy these days getting furnaces into basements, as it is practically impossible to find them at their place of business except to get supplies and furnaces.

Wilson Brothers, 1410 15th Street, are working overtime these days to make repairs to gutters, downspouts and any other sheet metal work that comes to them.

ROCK ISLAND, ILL.—William Bertelsen, 900½ 3rd Avenue, is doing some nice sheet metal work these days.

BURLINGAME, CAL.—The Garvey Sheet Metal Co., 1257 Paloma Street, has the sheet metal contract for the parish house for St. Paul Episcopal Church.

The Taege Hardware Co., 201 3rd Avenue W., has the furnace heating contract for the residence of Geo. H. Ilten.

DAVENPORT, IA.—The Steinhaus Heating Co., 124 Harrison Street, has the warm air heating contract for the residence of George Pennington. Mr. Steinhaus reports a good business.

WATERLOO, IA.—The F. J. Hackler Sheet Metal & Furnace Works, 809 E. 4th Street, has the furnace contract for the residence of Mike Bletsch.

The Mahles & Brandes Sheet Metal & Furnace Co., 721 Sycamore Street, has the heating contract for the residence of Chas. J. Beckman.

LOS ANGELES, CAL.—L. S. Wilson has the sheet metal work contract for the Pantages theater on Hollywood Blvd.

The Hodge Sheet Metal Works has been awarded the sheet metal contract for the Community M. E. Church at Westwood, Cal.

CINCINNATI, O.—The Moeschl-Edwards Corrugating Co., 12 W. 9th Street, has been awarded the kalamein, bronze and metal door contract for the First National Bank building in Port Arthur, Texas.

HOUSTON, TEX.—W. T. Glass, 2614 Leeland Street, has been awarded the sheet metal and roofing contract for the \$150,000 addition to the Convent of Good Shepherd.

DAVENPORT, IA.—W. E. Born, 728 W. 2nd Street, is busily engaged in putting on a roof made of a new type of roofing metal known as Ferro-lithic. Mr. Born is doing some fine factory sheet metal work and is experiencing a busy season.

Gus Kuehlcke, 1347 W. 3rd Street, is making a specialty of metal sign work.

He has one of his own signs on the outside of his store, which makes a very fine appearance and attracts attention of the passers-by. He also makes many other specialties of sheet metal, among some of which is a metal refuse burner, a lard rendering cylinder. He has one of the neatest shops in Davenport.

The A. J. Lerch Company, 220 W. 5th Street, have plenty of work at the present time to keep their organization busy. This firm is one of the largest and oldest of its kind in Davenport. It was started by A. J. Lerch in 1868. The two sons, G. C. Lerch and Oscar, are carrying on the business and continuing to expand it.

R. Claussen, 617 W. 2nd Street, is a hard man to see these days. He is busy trying to get people into a position where they can keep warm during this winter. His daughter does a good job of holding the fort at the office while he is out, however.

Jens Nielsen, 807 W. 4th Street, is endeavoring to work up a good business in Porstelain tile and is succeeding moderately well. He finds this method a good means of filling in when the furnace season is slack. He is also doing a good warm air heating and sheet metal business.

ROCK ISLAND, ILL.—The John T. Noftsker Estate, 1723 4th Avenue, is having no difficulty in keeping busy on sheet metal work these days.

R. G. Summers & Sons, 1416 6th Avenue, is having a busy time keeping roofs repaired and furnaces in working order. Mr. Summers sold out his business some time ago to his son, intending to retire and take things easy. But the urge to work was too strong in him to permit him to sit down and watch the world go by, so now he is back helping his son. The Rock Island furnace men are working on a Code ordinance for their city.

MOLINE, ILL.—E. A. Freed, 1530 3rd Avenue, has a very attractive warm air furnace display room and window. It is a pleasure to step into it. Mr. Freed is extremely busy these days getting folks ready for the oncoming winter weather.

Holmquist & Company, 1710 3rd Avenue, are experiencing a busy fall in the sheet metal line. They also handle furnaces and they, too, have an attractive display window and office at their place of business.

Hemmingson & Company, 807 15th Street, were very busily engaged in repairing a baptismal font when seen this week. The members of this firm are A. E. Hemmingson and R. E. Carlstrom, and what these boys don't know about baptismal fonts and how to use sheet metal in their construction isn't worth knowing.



Steel Wire

From Fred Magath, 309 North Jefferson Avenue, Mason City, Iowa.

Please let me know where I can get steel wire.

Ans.—Jos. T. Ryerson & Son, 2558 West 16th Street, and American Steel & Wire Company, 208 South La Salle Street; both of Chicago.

Hollow Rivets

From Washington Street Mill, 116 Washington Street, Kennewick, Washington.

Can you tell us who makes hollow rivets medium to large size?

Ans.—Tubular Rivet & Stud Company, 130 North Wells Street, and Chicago Rivet & Machine Company, 1830 South 54th Street; both of Chicago.

Aluminum Saw Handles

From C. J. Kersten, Kersten's Tin Shop, 1511 North Eighth Street, Sheboygan, Wisconsin.

I should like to know who makes aluminum key hole saw handles.

Ans.—Refer to Aluminum Company of America, 360 North Michigan Avenue, Chicago.

Ball Bearings—Special Casks

From F. E. Grunwaldt, 164 Gales Street, Seattle, Washington.

Please inform me who makes ball bearings, also who makes special cask to set bearings in.

Ans.—Chicago Pulley & Shafting Company, 23 North Desplaines Street, Chicago.

Coloring Copper Green

From W. R. Haines, 2405 Green Street, Racine, Wisconsin.

Can you tell me what to use to turn copper permanently green for outside use?

Ans.—One method is as follows: Prepare a paint by triturating copper carbonate with a pale spirit varnish (sandarac varnish, white shellac varnish), and apply it to the article with a brush. The greenish paint remains in the depressions and presents a patina-like appearance. Ordinary verdigris gives a bluish color, and crystallized verdigris a pale green color. Various intermediate shades may be obtained by mixing these two copper combinations. *Note:* Several other methods for coloring copper green is given in the "Metal Worker's Handy-Book of Receipts and Processes" by Brant.

Irregular Tank Pattern Development

By Adolf Kealer,
Instructor, Washburn Trade School

IN THIS lesson we will develop patterns for an irregular tank, an hexagonal pin tray and an hexagonal savings bank.

First mark off on the drawing paper the border line to dimensions given. In the left space make a working or projection drawing of the irregular shaped tank as shown. Begin with the ground lines A-B and C-D and the projection angle E-F. Then mark off the top view of the tank, $\frac{1}{4}$ inch away from the ground lines, with side A placed toward the front as shown. Follow the dimensions of all the sides and complete the top view.

Next project vertical lines from the top view into the front view and mark off the given height. Also project horizontal lines from the top view to the projection angle and from there down into the side view. Project also lines from the front view into the side view, to show the proper height.

In the right hand space, draw the isometric view either with the tee square and triangles or free hand, and below that mark off the patterns for the bottom and all the sides, allowing

laps where needed.

For the hexagon pin tray, proceed in the same manner as described above. Make the projection drawing on the left side of the paper and the isometric and the patterns on the right side. The pattern is in one piece as shown. The seams are butt-jointed and not lapped and there is a $\frac{1}{8}$ -inch hem at the top edge.

The hexagonal bank is included in this lesson for the student to test his own ingenuity, to make the projection drawing and the patterns from the information given in the isometric drawing. Laps should be allowed on the body and on the top and bottom pieces of the bank.

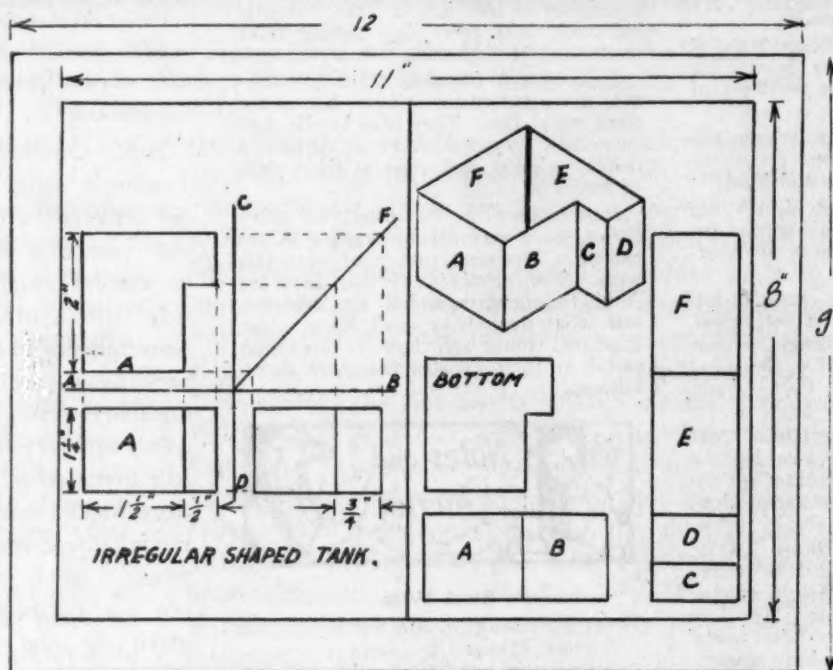
For anyone who wishes to make

this bank, the following operations should be followed:

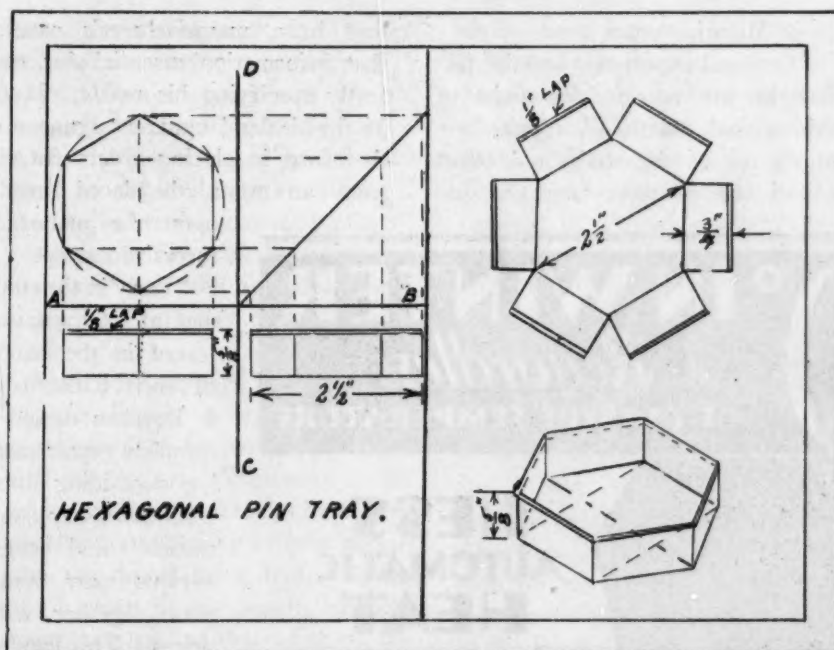
1. Mark and cut out top, bottom and body of bank.
2. Notch all pieces with hand snips.
3. To obtain marks for bending lines on body, a weight should be placed on top of pattern when marking the body, and with a scribe-awl press center marks onto the tin.
4. Bend body on bending lines in brake, beginning with the lap. The top or bottom piece can be used as a gauge, to bend every brake to the proper angle.
5. Punch slot in top piece on a lead cake and bend edges for top and bottom pieces in the folder.
6. To make the rectangular slot tube as shown in

Fig. 1, take two pieces of tin and bend one in the folder as shown in Fig. 2. After bending, use the cross peen of a hammer and while holding one edge on the square head stake, strike successive blows along the edge until it begins to curve to the desired shape. Do this to both edges alternately until it appears as shown in Fig. 3.

7. The second



Pattern for Irregular Shaped Tank



Pattern for Hexagonal Construction

piece of tin is rolled to the proper curvature as shown in Fig. 4 and then 3 and 4 are soldered together along the stretched edges to finish the slot tube.

8. Solder slot tube in proper place inside the top piece and then solder top and bottom pieces on the body to complete the savings bank.

Building Construction on Mend After Stock Crash

Now that the crisis in the stock market has passed, numerous constructive elements in general business lines should come into play, says the monthly business review of the American Bankers Association Journal.

"It can be seen that the underlying foundation is still sound and that the principal damage done by the storm was to tear away the superstructure that had become top-heavy through overextended credit," the journal says.

"The runaway bull market of the past several years seems to have ended. The day of easy profits without labor has passed. Trading on margin has not proved the royal road to wealth.

"Numerous constructive elements now enter the business picture. A genuine bond market promises to

return. Building construction should revive, as funds again are available for purchasing real estate and mortgages. Commercial enterprise should be stimulated with the burden of high interest rates removed. Foreign loans can again be sold to provide credits with which to build up our export trade.

"While the immediate effect of the stock crash may be to curtail

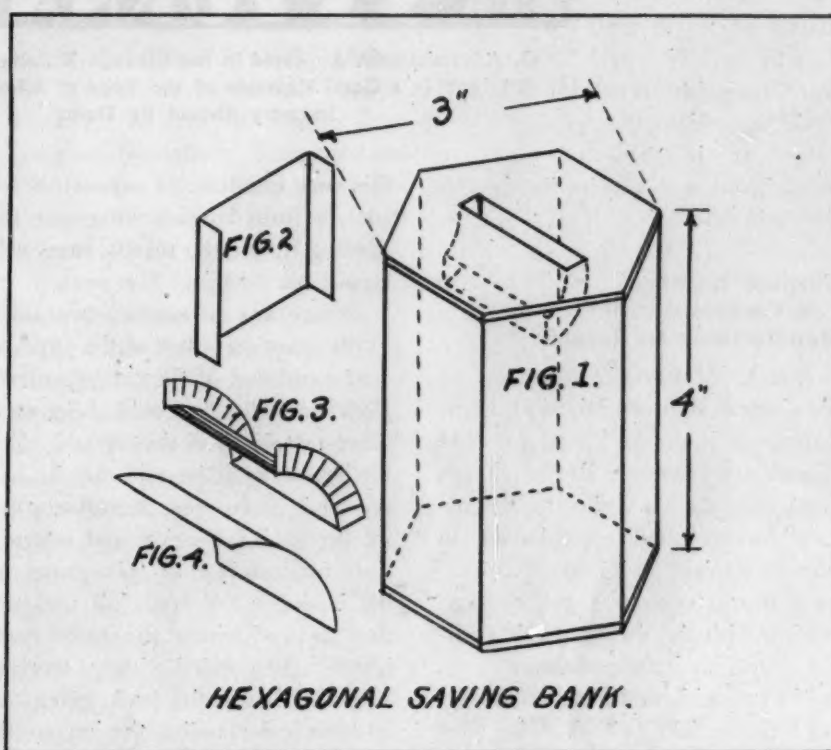
purchasing power somewhat for luxuries, a broad analysis will show that the ultimate result should be highly beneficial. Many individual holders of stocks have lost heavily, but America is noted for its rapid 'comeback' after any disaster, and this should be no exception."

Stanley Electric Tool, New Britain, Conn., Buys Unishear

The Stanley Electric Tool Company, subsidiary of The Stanley Works, New Britain, Connecticut, has purchased the trade name, stock on hand, tools, jigs, fixtures, etc., of the Unishear Company, 270 Lafayette Street, New York, and will continue manufacture and development at their main plant in New Britain, Connecticut.

The line comprises motor powered shears for outside and inside cutting of sheet material of every description.

Distribution will continue through regular established jobbing channels. Inquiries regarding service, repairs, as well as tools, should be addressed to The Stanley Electric Tool Company, New Britain, Connecticut.



Continuation of Hexagonal Construction

ADVERTISING TIE-UP*(Concluded from Page 95)*

ments, a little rearrangement of articles in the window and the thing is completed. The fellow who has no window cannot take advantage.

The thing "breaks" too quickly and the opportunity is gone before he even realizes that there was one. There is a merchandising problem in the warm air heating industry and the outline given herewith is one of the ways in which that merchandising problem can be successfully solved.

In another reproduction is an advertisement of one warm air furnace manufacturer which appeared in the same issue and on the same page that carried the two news columns reproduced. This general type of advertising is bound to increase the popularity of warm air heating. If only more manufacturers could appreciate the value of it, how much better it would be for the entire industry!

**Furnace Installer
Can Cooperate with
Manufacturer on Repairs**

Mr. L. McCulloch, manager of the Central Western Division, Richardson & Boynton Company, 144 Kensington Avenue, Buffalo, takes issue with the subscriber to AMERICAN ARTISAN who complained in our November 2nd issue that furnace manufacturers are not cooperating with the dealers to the full extent on furnace repairs.

"It was with much interest that I read the article published in your November 2nd issue of AMERICAN ARTISAN entitled 'Furnace Installers Complain of Poor Deliveries

from Manufacturers.'

"Personal experience and the fact that we are now in the midst of this annual 'battle of repairs' reminds me of the study and effort we of our company have put into

find in a manufacturer's catalog that information essential for correctly specifying his needs. Much of the dealers' apparent ignorance, therefore, in placing orders for repairs can certainly be placed directly upon the manufacturers' doorstep.

"Early in the summer of this year we placed in the hands of each Richardson & Boynton dealer a complete repair catalog containing illustrations of our older models and their various part numbers, together with prices. This catalog was most complete and up-to-date. It gave to our dealers that information they needed. Its use has reduced the number of illegible orders received surprisingly, has doubled the speed with which our orders can be edited and entered, erased completely misunderstandings with dealers over goods shipped in error, and in general sped up the repair business,

both for ourselves and our customers. Our experience leads me to believe that the manufacturer can help if he will.

"Let it also be said of the dealer that, generally speaking, he is asleep to his own possibilities of helping himself. A consistent effort on his part can and will cure many of his ills. A two-cent stamp, telephone and personal call in the late spring or early summer will close many repair jobs that will otherwise fall his way in a bunch during the fall. Delays of a week to ten days in shipping repairs for obsolete furnaces will always be present. The dealer should remember that the manufacturer is not geared for machine production on obsolete repairs as he is for repairs on current units.

70° IN WINTER

Regardless

OF OUTSIDE TEMPERATURE



There is a book on heating facts that you should have. It tells you many things you should know about furnaces and home heating. A copy will be mailed on request.

HESS AUTOMATIC HEAT

Cold days are upon us—are you suffering from chilly mornings—an uncomfortable house during the day—and cold evenings? Now is the time to insure your winter comfort with a Hess Automatic System. A Hess furnace, equipped with the latest improvements, will automatically keep your home at 70° temperature this winter, regardless of the weather outside, and with very little effort on your part. Hundreds of homes have found heating comfort the Hess way.

Hess Warming and Ventilating Company
1207 South Western Avenue
Chicago, Illinois

☐ Please send me your booklet on furnace heating.
☐ Please have your representative call without obligation to me.

NAME
ADDRESS
TOWN STATE PHONE

HESS FURNACES

This Advertisement Appeared in the Chicago Tribune, Sunday, November 10th, and Is a Good Example of the Type of Advertising the Entire Industry Should Be Doing

this very question. I cannot, therefore, refrain from writing you regarding it, for the results have well repaid us.

"There are, of course, two sides to the question—that of the furnace dealer and that of the manufacturer. Both undoubtedly could help each other materially if they would. For the dealer let it be said that he has received from few manufacturers intelligent information and instruction for conducting this phase of his business. When fall and the first signs of winter are felt he finds himself surrounded with an unsympathetic, to say the least, group of customers demanding the impossible from him and expecting him to produce it. Many of his troubles are the direct result of being unable to

Some antiquated items do not even warrant a manufacturer carrying in stock. Delays of this sort are not an embarrassment for the dealer when the job is closed in the summer. Let him, therefore, make a sincere effort to advance much of his repair business to the spring and summer, when both he and the manufacturer are better able to handle it.

"We have supplied free of charge to our dealers a stamped return postal card to be used by them in this very effort. Whenever it has been employed the results have been excellent, and almost without exception the dealer using it has shown an increase in his repair business from the very fact that, after all, the early bird really does get the worm.

"If the furnace dealer and the manufacturer together will devote a little time and thought to this question a great improvement can be made. Let it be said, however, that each must have the help and cooperation of the other."

Wisconsin Sheet Metal Men to Make Drive for Membership

The Master Sheet Metal Contractors' Association of Wisconsin held its monthly meeting in Milwaukee November 6.

The meeting was called to order by Vice-President R. G. Suettinger, Two Rivers, in the absence of President Geussenhainer, Sheboygan, with the following additional members present: Paul Biersach, C. C. Tolg, Wm. Gehrke, Alfred Goethel and W. A. Belau.

Paul Biersach reported on the Wisconsin State Chamber of Commerce, Madison, Wisconsin, who have been soliciting our membership, stating that the activities of the group were all very well and would no doubt help the association in a general way, but that the association could expect no individual legislative help in any way. Motion made and carried that action be held over until next meeting.

Membership came up for an interesting discussion, C. C. Tolg stating that some sheet metal men

show more interest in joining a luncheon club than an association for the good of their industry. Individual calls on non-members was accepted as the only way to get new members, but the secretary was instructed to get out another follow-up drive letter.

Next Indiana District Meeting to Be Held at Columbus December 13

District Governor William C. Loesch of the Indiana Sheet Metal and Warm Air Heating Contractors' Association, Columbus, Indiana, has set December 13th as the date for the district meeting to be held at Columbus. The Chamber of Commerce rooms at Columbus, Indiana, have been reserved for both the afternoon and evening of that day.

A local committee made up of Governor Loesch, chairman, J. R. Everroad, and Walter Brooks of Columbus, are working on the local arrangements. The general committee includes George F. Newman of Cynthiana, Wm. Freese of Edinburg, Fred Schafer and O. S. Wagner of Franklin, Wm. Lasiter of Greenwood, Chas. E. Davis of Jeffersonville, W. Neil Walker of Madison, Bert Huncilman and R. A. Huncilman of New Albany, H. A. Stearns of North Vernon, Jesse E. Bowers of Salem, John Craig of Scottsburg, Harry E. Davis of Hope, W. E. Brown and Mr. Pearson of Shelbyville, J. H. Pollett and C. H. Cordes of Seymour.

Others will be added later as organization plans are perfected.

The meeting will be a dinner scheduled for 6:30 p. m., preceded by an informal get-together meeting and followed by an interesting program. The dinner hour is set for 6:30, in order to give visiting contractors an opportunity to complete the day's work before leaving for the meeting. The meeting will be adjourned at 9:30 or 10 o'clock so that the guests may get home in good time.

These district meetings are open to non-members as well as members; as a matter of fact they are

gotten up having in mind the non-members more than the members, as the member has other opportunities to rub elbows with his competitors. Material men also are expected to attend, as the meeting could not be called representative of the entire craft without a goodly number of salesmen, jobbers, manufacturers and their representatives on hand.

A good many men from Indianapolis, New Castle, Richmond, Louisville, Terre Haute and Bloomington and other points outside the district have announced their intention of attending the meeting. With a good local attendance, assured by the interest within the district itself, the meeting is certain to be a big one and to add impetus to the already growing interest in the Indiana state convention scheduled for Indianapolis January 21-2-3, 1930.



National Warm Air Heating Association, Columbus, Ohio, December 3 and 4, 1929. Allen Williams, 174 East Long Avenue, Columbus, Managing Director.

Kentucky Hardware and Implement Association Convention, Brown Hotel, Louisville, January 14, 15, 16 and 17, 1930. J. M. Stone, Secretary, 200 Republic Building, Louisville.

Texas Hardware and Implement Association Convention and Exhibition, Houston, January 21, 22 and 23, 1930.

American Society of Heating & Ventilating Engineers and International Heating and Ventilating Exposition, Philadelphia, January 27 to 31, 1930. A. V. Hutchison, 29 West 39th Street, New York, Secretary.

Missouri Retail Hardware Association Convention and Exhibition, New Hotel Jefferson, St. Louis, January 28, 29 and 30, 1930. F. X. Zecherer, Secretary, 5106 North Broadway, St. Louis.

Indiana Retail Hardware Association Convention, Manufacturers' Building, Indiana State Fair grounds, Indianapolis, January 28, 29, 30 and 31, 1930. G. F. Sheely, Secretary, 911-913 Meyer Kiser Bank Building, Indianapolis.

Ohio Hardware Association Convention and Exhibition, Columbus, Ohio, February 4, 5, 6 and 7, 1930. James B. Carson, Secretary, 315 Mutual Home Building, Dayton.

Wisconsin Retail Hardware Association Convention and Exhibition, Auditorium, Milwaukee, February 4, 5, 6 and 7, 1930. B. Christianson, Secretary, Stevens Point. G. W. Kornely, Exhibit Manager, 1476 Green Bay Ave., Milwaukee.

RANDOM NOTES AND SKETCHES

Here's a letter from my friend, Fred A. Jahr, 482 West Division Street, Fond Du Lac, Wisconsin, who says: "Dear Sid.: Reading your page in *AMERICAN ARTISAN*, I just ran across the old Nebraska coon hunter's problem and had a lot of fun solving it. As I succeeded in solving it, I am sending the solution in. Of course, if I had not solved it, you perhaps would not have heard from me. I'm sending this so that the coon hunter can get back and write something more about the Furniz Biznis. Tell Bill to fill his 5-gallon jug and pour it into the 7-gallon jug. Then fill the 5-gallon jug again and pour two more gallons into the 7-gallon jug, which will fill the latter, leaving three gallons in the 5-gallon jug. Then empty the 7-gallon jug and pour the three gallons remaining in the 5-gallon jug into the 7-gallon jug, fill the 5-gallon jug full and go merrily on the way home. Give my best regards to Bill."

Well, Fred, you're all right and any time that I get stuck on any more of these problems that some of these birds send in here, I'll call on you to help me out. You know it's mighty comforting to know that you can do that sometimes, and I surely do appreciate your assistance, Fred.

"Thankful? What have I got to be thankful for? I can't even pay my bills."

"Why, man, be thankful that you are not one of your creditors."

Two moonshiners were discussing the merits and strength of their products.

"Ah makes mah licker so strong," declared one, "dat when yo' drinks it yo' can done smell de cornfield whar dat corn was grown."

"Humph! Nigger, dat ain't

BY
SIDNEY ARNOLD



nothin'," was the contemptuous comeback. "Ah spilled a few drops of mah licker on mah wife's pansy patch an' dem pansies dun turned tuh tiger lilies, yas, sah."

She: "I wouldn't think of marrying such an intellectual monstrosity and physical misfit as you are—you numbskull! Do you get me?"

He: "Well, from the general trend of your conversation, I should judge not."

"You took that little blonde from the notions department home last night, didn't you?"

"I'll say I did, and I kissed her good-night, too."

"What did she say?"

"Oh, she just said, 'Will that be all?'"

Flapper: "How long after the anesthetic will it be before I know anything?"

Doctor: "Aren't you expecting too much of an anesthetic?"

Perhaps you've heard the one about the Scotchman who played a flute in a band. He went to practice one night but did not make any attempt to play his instrument. The band-master, noticing this, asked him why he wasn't playing his part.



"I can't," said the Scotchman. "I have splinters in my tongue."

"Well, how did you get them?" asked the bandmaster.

"I spilled my wee drop on the floor last night."

"I am satisfied on one thing at last; I found where my husband spends his evenings," remarked Mrs. John Bas, Muskegon, Michigan.

"You don't say so, dear; how did you find out?" questioned the excited neighbor.

"I stayed home one evening last week and found him there," answered Mrs. Bas.

Ken Reames, credit manager of Premier Warm Air Heater Co., Dowagiac, was asked to make a talk at the meeting of a Business and Professional Women's Club recently. After his talk one of the women made a short address stating that 90 per cent of the money spent was spent by the women of the world.

"Ken" rose to his feet when she asked if there were any questions and said: "Am I to understand that statistics show that my wife spends 90 per cent of my salary, and that I spend 10 per cent?"

He was answered in the affirmative.

"Then I am going right home and talk with her about that. She's holding out on me and I shall demand my right to spend that 10 per cent."

The young man was prematurely gray, and proud of it.

"Looks quite poetic, don't you think?" he asked the girl he had met at the beach.

"It does remind me of a certain poem," she said.

"And what's that?"

"'When the Frost Is on the Punkin.'"

Caution Is Dominant Market Policy

Iron, Steel Buyers and Makers Conservative, Accelerating Seasonal Down-turn—Scrap Prices Softer—Railroads Most Active Factor

IRON and steel buying and production are becoming increasingly sensitive to the uncertain state of business mind engendered by the recent stock market disturbance.

In the automotive industry, first of major consuming lines to react, retrenchment has been drastic. In almost all other lines, the railroads excepted, a spirit of caution prompts a scaling down of requirements pending a clearer view of the situation.

As consumers grow more conservative, producers are taking off capacity commensurately. At Chicago three steel works furnaces have been banked and ingot production reduced to 75-78 per cent.

October freight car awards of 19,506 were the heaviest for any month in over five years, bringing the 10-month total to 90,034, almost double the 44,763 cars ordered in all 1928, and foreshadowing the volume of car material to be rolled in the next two quarters.

Consumers whose stocks have been low for a number of months are now even more cautious in placing forward tonnage.

Current buying generally is for immediate requirements. Incoming tonnage fails to equal production or shipments, although old orders provide furnaces with a fair movement and backlogs are declining steadily.

Prices lack strength, and although occasional reports of shading are heard, lack of substantial tonnages in new business gives producers little incentive for cutting quotations.

Market prices are \$18.50, valley, for No. 2 foundry and basic, and \$19, valley, for bessemer and malleable.

Spot orders in moderately heavy volume chiefly support sales activity in northern pig iron at Chicago.

Shipping orders show no appreciable decline from last month, except for malleable grades to the makers of automotive castings.

Little pig iron has been left over at the docks from the lake shipments during the season just closed for disposal in this market.

It is understood one seller of southern iron will accept business at \$13, base, Alabama furnace, but other sellers are naming a minimum of \$13.50.

Much iron still is moving into competitive sections.

Unfilled tonnage books show considerable iron yet due. No doubt is expressed that extension of period of low freight rates into eastern and middle west territories will be granted by the interstate commerce commission after March 31, and solicitation for more business will be made. Few sales are reported for first quarter. Present base is \$14 to \$14.50 for No. 2 foundry.

Recent sharp reductions in prices of zinc and lead have brought out reports of curtailed production programs in these metals during the past week.

Although electrolytic copper producers have remained firm in their quotations while weakness has developed in all other non-ferrous metal prices except aluminum, rumors are heard in the red metal market that additional curtailment of output may be instituted.

Fresh business in general has continued dull, while price shading has been reported in nearly all metals. Current lead and zinc quotations are the lowest in over a year, while tin prices have not been so weak in more than six years.

Zinc and lead ore quotations again have been cut in the tri-state district, while non-ferrous scrap metal prices reflect virgin metal easiness in leading markets of the country. Brass ingot prices have been reduced a half-cent by most leading sellers.

Copper

Despite October reduction of refined copper stocks to the lowest level since June this year and a gain

in total shipments to the second largest movement on record, limited to fair tonnages of metal have been offered by second hands at a quarter to a half-cent under producers' prices. Consumers have continued to show little interest in purchases in spite of the resale offerings.

Producers, in the meantime, have held steadily to their 18-cent quotations. Production of refined copper increased during October to the largest tonnage since July, and producers have been reported as predicting that November output undoubtedly will be under the October rate.

Tin

Uncertainty, lack of buying interest and weakening influence from abroad have continued prevalent in the tin market.

A display of strength in prices on Tuesday led the interest in the market here to believe that professional support was being given to the London market.

Consumers' faith in the future trend of conditions here remains absent.

Zinc

Although price shading is believed to have declined somewhat during the past week, reports persist of metal offered at less than producers' quotations.

It is stated that, due to weakness in the market in this country resulting from price declines in London and large stocks available here, reduced output is being planned.

Production was cut a few thousand tons last month.

Lead

The St. Joseph Lead Co. has announced a 15 per cent curtailment of production, and while definite announcements from other companies are lacking, additional curtailment is said to be pending. Producers are holding to their present price levels, although some shading is reported possible.

Chicago Warehouse Metal and Furnace Supply Prices

AMERICAN ARTISAN is the only publication containing Western Metal, Furnace Supply and Hardware prices corrected weekly

Note: These Prices Are Chicago Warehouse Prices of Metal, to Which Must Be Added Freight to Cities Outside of Chicago.

METALS

PIG IRON

Chicago Fdy.,	
No. 2	\$20 00
Southern Fdy. No. 2	21 51
Lake Superior Charcoal	27 04
Malleable	30 00

FIRST QUALITY BRIGHT CHARCOAL TIN PLATES

IC	20x28 112 sheets	\$22 50
IX	20x28	25 50
IXX	20x28 56 sheets	14 50
IXXX	20x28	15 50
IXXXX	20x28	17 00

TERNE PLATES

IC	30x38, 40-lb. 112 sheets	\$26 70
IX	30x38, 40-lb. 112 sheets	29 70
IC	30x38, 25-lb. 112 sheets	23 30
IX	30x38, 25-lb. 112 sheets	25 30
IC	30x38, 20-lb. 112 sheets	20 35
IV	30x38, 20-lb. 112 sheets	23 00

"ARMCO" INGOT IRON PLATES	
No. 3 ga.—100 lbs.	\$4 15
5/16 in.—100 lbs.	4 05
1/4 in.—100 lbs.	3 85

COKE PLATES

Cokes, 80 lbs., base, 20x28	\$13 00
Cokes, 90 lbs., base, 20x28	13 30
Cokes, 100 lbs., base, 20x28	13 40
Cokes, 107 lbs., base, IC	
20x28	12 75
Cokes, 135 lbs., base, IX	
20x28	14 75
Cokes, 155 lbs., base, IX	
20x28	15 50
Cokes, 175 lbs., base IX	
20x28	9 35
Cokes, 195 lbs., base IX	
20x28	10 35

WELDED ANNEALED SHEETS	
Base 10 ga.—per 100 lbs.	\$3 35
"Armco" 10 ga.—per 100 lbs.	4 15

JUNE PASS COLD ROLLED BLACK	
No. 12-20	per 100 lbs. \$3 85
No. 22	per 100 lbs. 4 00
No. 24	per 100 lbs. 4 05
No. 26	per 100 lbs. 4 15
No. 27	per 100 lbs. 4 25
No. 28	per 100 lbs. 4 30
No. 29	per 100 lbs. 4 45
No. 30	per 100 lbs. 4 55

"ARMCO" GALVANIZED	
"Armco" 24	per 100 lbs. \$6 15

GALVANIZED

No. 16	per 100 lbs. \$4 40
No. 18	per 100 lbs. 4 55
No. 20	per 100 lbs. 4 70
No. 22	per 100 lbs. 4 75
No. 24	per 100 lbs. 4 90
No. 26	per 100 lbs. 5 15
No. 27	per 100 lbs. 5 35
No. 28	per 100 lbs. 5 40
No. 30	per 100 lbs. 5 50

BAR SOLDER

Warranted 50-50 per 100 lbs.	\$29 00
48-52	per 100 lbs. 28 00
45-55	per 100 lbs. 25 50
Plumbers'	per 100 lbs. 24 00

ZINC

In Slabs	\$ 7 35
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SHEET ZINC

Cask Lots (500 lbs.)	\$12 00
Sheet Lots	14 00

BRASS

Sheets, Chicago base	24 1/2c
Mill base	23 1/2c
Tubing, brazed, Chicago base	31 1/2c
Mill base	30 1/2c
Tubing, seamless, Chicago base	29 1/2c
Mill base	28 1/2c
Wire, Chicago base	24 1/2c
Mill base	23 1/2c
Rods, Chicago base	22 1/2c
Mill base	21 1/2c

COPPER

Sheets, Chicago base	27 1/2c
Mill base	26 1/2c
Tubing, seamless, Chicago base	30 1/2c
Mill base	29 1/2c
Wire, plain rd., 3 B. & S. Go. and heavier	25 1/2c

LEAD

American Pig	\$7 00
Bar	8 00

TIN

Bar Tin	per 100 lbs. \$47 00
Pig Tin	per 100 lbs. 46 00

HARDWARE, SHEET METAL SUPPLIES, WARM AIR FURNACE FITTINGS AND ACCESSORIES.

ASBESTOS

Paper up to 1/16	60c per lb.
Roll board	7 1/2c per lb.
Mill board 3/32 to 1/2	7 1/2c per lb.
Corrugated Paper (250 sq. ft. to roll)	\$6 00 per roll

BRUSHES

Furnace Pipe Cleaning Bristle with handle each	\$0 75
Flue Cleaning Steel only, each	1 25

CEMENT, FURNACE

American Seal, 5-lb. cans, net	\$ 45
American Seal, 10-lb. cans, net	55
American Seal, 25-lb. cans, net	2 25
Pecora	per 100 lbs. 7 50

CHIMNEY TOPS

Adams' Revolving	Wt. Doz.	Price Doz.
4 in.	31 lbs.	\$11 00
6 in.	34 lbs.	11 50
7 in.	30 lbs.	13 50
8 in.	33 lbs.	15 00
9 in.	51 lbs.	16 50
10 in.	56 lbs.	18 00
12 in.	66 lbs.	22 00
14 in.	110 lbs.	26 00

CLINKER TONGS

Each	\$1 50
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CLIPS

Damper No-Rivet Steel, with tail pieces, per gross	\$9 50
Rivet Steel, with tail pieces, per gross	7 50
Tail pieces, per gross	3 40

COPPERS—Soldering

Pointed Roofing	
3 lb. and heavier	per lb. 40c
2 1/2 lb.	per lb. 45c
2 lb.	per lb. 48c
1 1/2 lb.	per lb. 55c
1 lb.	per lb. 60c

CORNICE BRACKETS

Chicago Steel Bending	
No. 1 to 6B	Net

CUT-OFFS

Gal., plain, round or cor. rd.	
26 gauge	30%
28 gauge	35%

DAMPERS

Yankee Hot Air	
7 inch, doz.	\$1 60
8 inch, doz.	2 20
9 inch, doz.	2 60
10 inch, doz.	2 80
12 inch, doz.	3 50
14 inch, doz.	5 00

ADAMS No. 1 CHECK

Check and Collar Complete	
8 inch, each	3 00
9 inch, each	2 25
End Check Only	
8 inch, each	1 60
9 inch, each	1 35
Collar Only	
8 inch, each	50
9 inch, each	65

No. 2 CHECK

8 inch, each	1 00
9 inch, each	1 00
10 inch, Disc. on Adams No. 1	
and No. 2 Check	
Diamond Smoke Pipe	
7 inch, doz.	\$3 00
8 inch, doz.	3 20
9 inch, doz.	4 30
10 inch, doz.	4 00

Adams' Sheet Metal

7 inch, doz.	\$1 60
8 inch, doz.	2 20
9 inch, doz.	2 60
10 inch, doz.	2 80
12 inch, doz.	3 50
14 inch, doz.	5 00

RAVES TROUGH

Galv. Crimpedge; crated	.75-10%
Zinc, "Barnes"	.60%

ELBOWS

Conductor Pipe	
Galv. plain or corrugated, round flat Crimp,	
26 Gauge	.60%
28 Gauge	.45%
34 Gauge	.15%
Galv. Terne Steel	
Plain Rd. and Rd. Corr.:	
28 Ga.	.60%
30 Ga.	.45%
34 Ga.	.15%

Square Corrugated

No. 28 Gauge	.50%
34 Gauge	.35%

Fortico Elbows

Standard Gauge Conductor Pipe, plain or corrugated.	
Not nested	.70 & 5%
Nested Solid	.70 & 5%

Sq. Corr., A. & B. & Octagon	
28 Ga.	.50%
34 Ga.	.35%

Fortico

1", 1 1/4", 1 1/2"	.45%
--------------------	------

Copper

16 oz., all designs	.40%
---------------------	------

Zinc

All styles	.60%
------------	------

ELBOWS—Stove Pipe

1-piece Corrugated, Uniform Blue	
"Milcor" No. 28 Gauge, Doz.	
5-inch	\$1 15
6-inch	1 35
7-inch	1 75

Special Corrugated

6-inch	\$1 00
7-inch	1 60

Adjustable—Uniform Blue

"Milcor" No. 28 Gauge, Uniform Blue, Doz.	
5-inch	\$1 60
6-inch	1 75
7-inch	2 10

WOOD FACES—40% off list.

FENCE

736-6-12 1/2% (100 rods)	\$28 68
1948-6-14 1/4% (100 rods)	43 63

FILES AND RASPS

Heller's (American)	.50-10%
American	.60-10%
Arcade	.50%
Black Diamond	.50%
Eagle	.50%
Great Western	.50%
Kearney & Foot	.50%
McClellan	.50%
Nicholson	.50%
Almonds	.60%

FIRE POTS

Geo. W. Diener Mfg. Co.	
No. 02 Gasoline Torch, 1 qt.	\$ 18
No. 9250, Kerosene, or Gasoline Torch, 1 qt.	4 50
No. 10 Tinner's Furn. Square tank, 1 gal.	11 30
No. 15 Tinner's Furn. Round tank, 1 gal.	10 70
No. 21 Gas Soldering Furnace	3 00
No. 110 Automatic Gas Soldering Furnace	10 50

GALVANIZED WARE

Pails (Galv. after made), 10-qt.	\$3 00
Tubs (Galv. after made), No. 1	5 75
No. 2	6 50

GLASS

Single Strength, A, all brackets	.55%
Single Strength, B, all brackets	.57%
Double Strength, A, all brackets	.55%
Double Strength, B, all brackets	.57%

HANGERS

Conductor Pipe	
Milcor Perfection Wire	.35%
Milcor Triplex Wire	.10%
Haves Trough	
Milcor Steel (galv. after forming) from List	.60%
Milcor Selflock E. T. Wire, List	.10%

HOOKS

Conductor	
"Direct Drive" Wrought Iron for wood or brick	.15%

HUMIDIFIERS

"Front-Rank" Automatic	
In single lots	.50%
In lots of 10 or more	.50-55%
In lots of 25 or more	.50-10%
Vapor pans, etc., each	.50%

LIFTERS

Stove Cover	
Coppered	per gro. \$6 00
Alaska	per gro. 4 75

MAILLETS

Tinners	
Hickory	per doz. \$1 25

MITRES

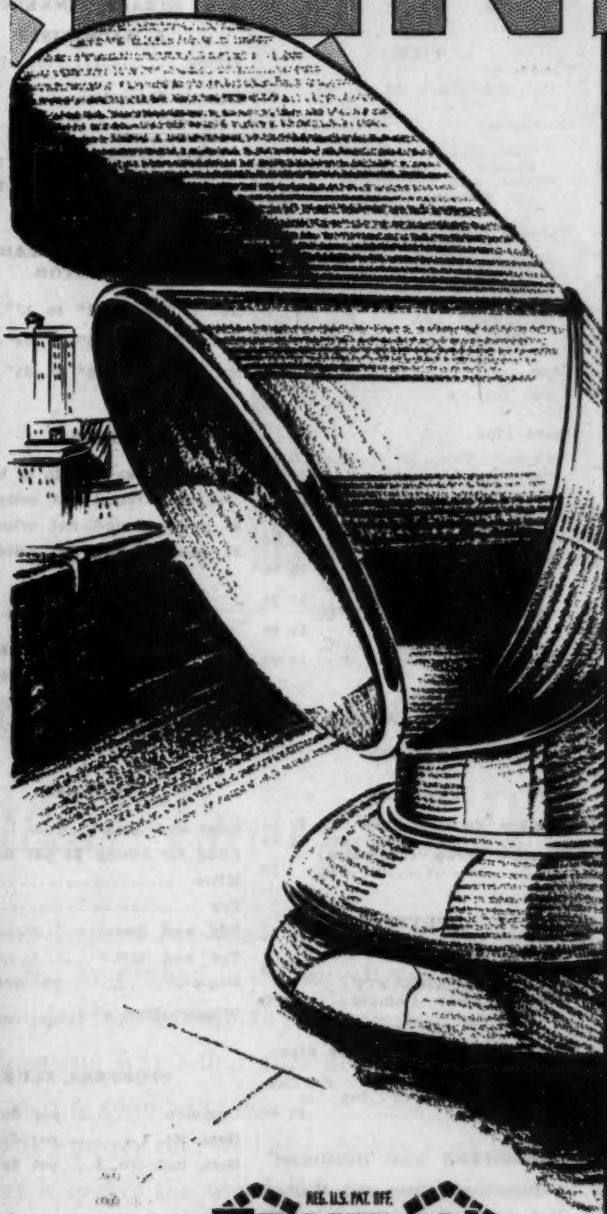
Galvanized steel mitres	
28 Ga.	.70
36 Ga.	.60-30

NAILS

Cut Steel, base	
	\$4 00
Wire	
Common Wire, L. C. L.	3 20
Cement Coated	3 20

(Continued on page 112)

TONCAN



Beat Deterioration with Rust-Resisting TONCAN IRON

YOUR customers need never worry about the effects of rain or snow—the rust and corrosion that result from continuous atmospheric attack if you have used Toncan Copper Mo-lyb-den-um Iron.

Toncan—a scientific alloy of copper, molybdenum and pure iron is the most durable ferrous metal known.

Moisture—weather conditions—even time, will find stubborn resistance in Toncan. Repairs and costly maintenance charges are practically unknown when this remarkable metal is specified.

For roofing—heating and ventilating systems—window frames—skylights—metal lath—gondola cars—pipes—gutters—canopies, etc., you will find Toncan iron is the most lasting and economical material you can use.

Let us send you further particulars about Toncan and its many uses.

CENTRAL ALLOY STEEL CORP.
Massillon and Canton, Ohio



WORLD'S LARGEST AND MOST HIGHLY SPECIALIZED ALLOY STEEL PRODUCERS

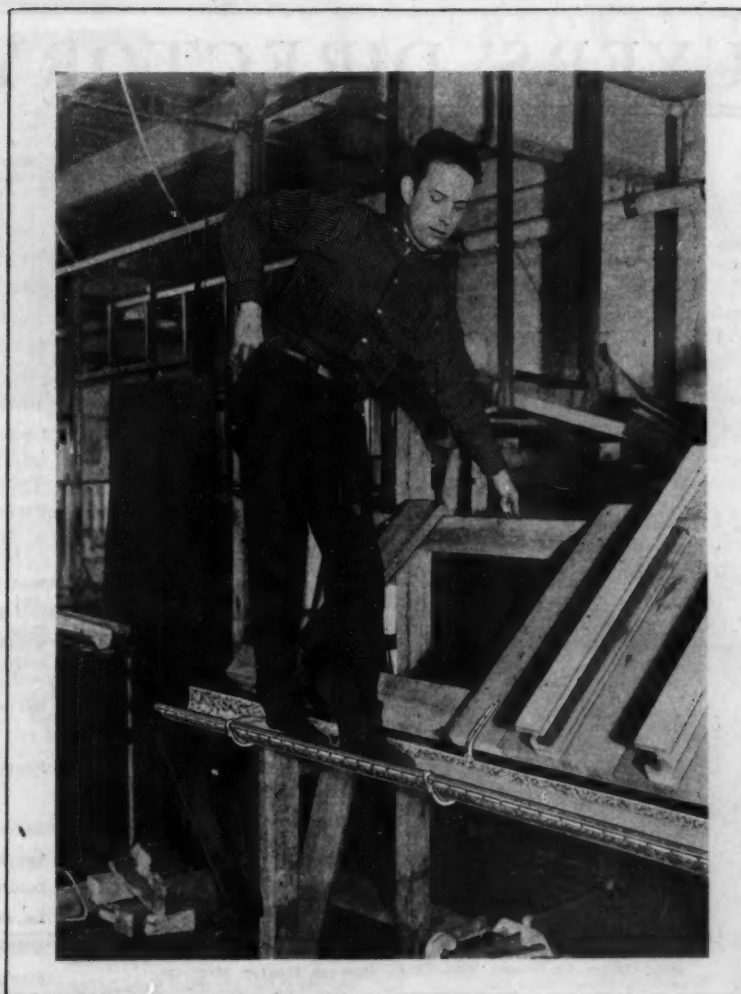
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PASTE		RIDGE ROLL	
Asbestos Dry Paste:		Galv., Plain Ridge Roll,	
200-lb. barrel	\$14 00	b'd'd	75-15-4%
100-lb. barrel	7 50	Galv., Plain Ridge Roll	
50-lb. pail	4 35	crated	75-15'
10-lb. bag	1 00		
5-lb. bag	55		
2 1/2-lb. cartons	35		
POKERS, FURNACE		SCREWS	
Each	\$0 75	Sheet Metal	
POKERS, STOVE		7, 1/2x1/4, per gross	\$0 83
Nickel Plated, coll handles,		No. 10, 1/2x3/16, per gross	88
per doz.	1 10	No. 14, 1/2x1/4, per gross	88
Wrt Steel, str't or bent,			
per doz.	\$0 75	SHEARS, TINNERS'	
PIPE		& MACHINISTS'	
Conductor		Viking	\$23 00
Cor. Rd., Plain Rd., or Sq.		Lennox Threadless	
Galvanized		No. 18	35%
Crated and nested (all gauges)	75-7 1/4%	Shear blades	10%
Crated and not nested (all gauges)	75-3 1/4%	(f. o. b. Marshalltown, Iowa)	
FURNACE PIPE		SHIELDS, ADJUSTABLE RADIATOR	
Double Wall Pipe and Fittings	50 & 10%	No. 1 "Gem" 11" to 17"	30%
Single Wall Pipe, Round		No. 2 "Gem" 14" to 24"	30%
Galvanized Pipe	50 & 10%	No. 3 "Gem" 25" to 45"	30%
Galvanized and Tin Fittings	50 & 10%		
Lead		SHOES	
Per 100 lbs.	\$12 50	Galv. 28 Gauge, Plain or corrugated round flat crimp.	30%
Steel Pipe		36 gauge round flat crimp.	45%
"Milcor" "Titelock" Uniform Blue Stove		34 gauge round flat crimp.	15%
28 gauge, 5 inch U. C.	11 00	SNIPS, TINNERS	
28 gauge, 6 inch U. C.	13 00	Clover Leaf	40 & 10%
28 gauge, 7 inch U. C.	14 00	National	40 & 10%
30 gauge, 5 inch U. C.	10 35	Star	50%
30 gauge, 6 inch U. C.	11 00	Milcor	Net
30 gauge, 7 inch U. C.	13 00	SQUARES	
T-Joint Made up		Steel and Iron	Net
6-inch, 28 ga. per doz.	\$ 40	(Add for bluing \$3 per doz. net)	
All Zinc		Mitre	Net
No. 11, all styles	40%	Try	Net
PULLEYS		Try and Bevel	Net
Furnace Tackle	per doz. \$0 85	Try and Mitre	Net
Furnace Screw (enameled)	per doz. 75	Fox's	per doz. \$6 00
PUTTY		Winterbottom's	10%
Commercial Putty, 100-lb. Kits	\$3 15	STOPPERS, FLUE	
QUADRANTS		Common	per doz. \$1 10
Malleable Iron Damper	10%	Gem, No. 1	per doz. 1 10
REDUCERS—Oval Stove Pipe		Gem, flat, No. 1	per doz. 1 00
Per Doz.		VENTILATORS	
7-8, 28-gauge, 1 doz. in carton	\$2 00	Standard	30 to 40%
REGISTERS AND BORDERS		WIRE	
Baseboard, Floor and Wall		Black annealed wire, No. 9, per 100 lbs.	\$3 30
Cast Iron	20%	Galvanized barb wire, per 100 lbs.	3 30
Steel and Semi-Steel	33 1/2%	Cattle Wire—galvanized catch weight spool, per 100 lbs.	3 30
Baseboard, 1 piece	33 1/2-20%	Galvanized Plain Wire, No. 9, per 100 lbs.	3 75
Baseboard, 2 piece	33 1/2%		
Wall	33 1/2%		
Adjustable Ceiling Ventilators	33 1/2%		
Register Faces—Cast and Steel			
Japanned, Bronzed and Plated, 4x6 to 14x14	33 1/2%		
Large Register Faces—Cast, 14x14 to 38x42	50%		
Large Register Faces—Steel, 14x14 to 38x42	60%		
Ventilating Register			
Per gross	\$ 00		
Small, per pair	30		
Large, per pair	50		



WHEN THE AVALANCHE STARTS SLIDING THESE TROUGHS WILL STAND THE LOAD

THE NEW Lupton Art-Bead Trough was built for beauty, but *first* it had to do the job that a gutter was intended for. The above photograph proves—in a dramatic way—that this new trough is as strong as it is good-looking.

Here is a gutter that will add style to your jobs. The way it makes the weather behave will please your customers all the more. When that ton of snow comes rolling down the roof, this gutter can take it on the jaw, and still *stand up*.

No trouble in fitting. Takes any type of hanger—although the Lupton shank and circle is recommended for extra strength. No valuable time lost for your helper. And no greater cost. Made in 16-ounce copper, Armco Ingot Iron, Toncan Metal, Follansbee Forge and Galvanized Steel. Get your jobber to show you a sample. Then try these new troughs on your next job. David Lupton's

Sons Company, Allegheny Avenue and Tulip Street, Philadelphia, Pa.

LUPTON ART-BEAD TROUGH

Mention AMERICAN ARTISAN in your reply—Thank you!

BUYERS' DIRECTORY

- Air Cleaners.**
Meyer & Bro. Co., F., Peoria, Ill.
Watt Mfg. Co., Sterling, Ill.
- Air Conditioning Machines.**
Heating Systems Corp., Joliet, Ill.
Watt Mfg. Co., Sterling, Ill.
- Asbestos Paper.**
Sati-Mountain Co., Chicago, Ill.
- Asbestos Liquid.**
B. & F. Mfg. Co., Des Moines, Iowa
- Benches—Steel.**
Maplewood Machinery Co., Chicago, Ill.
- Blind Gates**
Berger Bros. Co., Philadelphia, Pa.
- Blowers—Furnace.**
Lakeside Co., Hermansville, Mich.
- Bolts—Stove.**
The Kirk-Latty Co., Cleveland, Ohio
Lamson & Sessions Co., Cleveland, Ohio
Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.
- Brakes—Bending.**
Dreis & Krump Mfg. Co., Chicago, Ill.
Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.
- Brakes—Cornice.**
Dreis & Krump Mfg. Co., Chicago, Ill.
- Brass and Copper.**
American Brass Co., Waterbury, Conn.
- Cans—Garbage.**
Diener Mfg. Co., G. W., Chicago, Ill.
Osborn Co., The J. M. & L. A., Cleveland, Ohio
- Castings—Malleable.**
Fanner Mfg. Co., Cleveland, Ohio
- Ceilings—Metal.**
Eller Manufacturing Co., Canton, Ohio
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
- Chaplets.**
Fanner Mfg. Co., Cleveland, Ohio
- Chimney Tops.**
Standard Ventilator Co., Lewisburg, Pa.
- Cleaners—Vacuum.**
Brillion Furnace Co., Brillion, Wis.
National Super Service Co., Toledo, Ohio
Williamson Heater Co., Cincinnati, Ohio
- Copper.**
American Brass Co., Waterbury, Conn.
Rockford Sheet Steel Co., Rockford, Ill.
- Cornices.**
Eller Manufacturing Co., Canton, Ohio
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
- Cut-offs—Rain Water.**
Eller Mfg. Co., Canton, Ohio
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
- Dampers—Quadrants—Accessories.**
Eller Mfg. Co., Canton, Ohio
Howes Co., S. M., Boston, Mass.
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
Parker-Kalon Corp., New York, N. Y.
- Damper Regulators.**
H. M. Sheer Co., Quincy, Ill.
- Dies—Punch & Press.**
La Salle Machine Works, Chicago, Ill.
- Diffuser—Air Duct.**
Aeolus-Dickinson Co., Chicago, Ill.
- Doors—Metal.**
Lupton's Sons Co., David, Philadelphia, Pa.
- Drills—Electric.**
Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.
- Drive Screws—Hardened Metallic.**
Parker-Kalon Corp., 290 Varick St., New York
- Dust Eliminator.**
Dustless Ash Co., Muskegon, Mich.
- Eaves Trough.**
Barnes Metal Products Co., Chicago, Ill.
Berger Bros. Co., Philadelphia, Pa.
Eller Mfg. Co., Canton, Ohio
Lupton's Sons Co., David, Philadelphia, Pa.
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
New Jersey Zinc Sales Co., The, New York, N. Y.
Rockford Sheet Steel Co., Rockford, Ill.
- Elbows and Shoes—Conductor.**
Barnes Metal Products Co., Chicago, Ill.
Dieckmann Co., Ferdinand, Ohio
Eller Mfg. Co., Canton, Ohio
Lupton's Sons Co., David, Philadelphia, Pa.
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
Rockford Sheet Steel Co., Rockford, Ill.
- Fittings—Conductor.**
Barnes Metal Products Co., Chicago, Ill.
Eller Mfg. Co., Canton, Ohio
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
- Flue Thimbles.**
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
- Furnace Cement—Asbestos.**
Connors Paint Mfg. Co., Wm., Troy, N. Y.
Eller Mfg. Co., Canton, Ohio
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
- Furnace Cement—Liquid.**
Technical Products Co., Pittsburgh, Pa.
- Furnace Cleaners—Hand.**
J. L. Skuttie Mfg. Co., Dowagiac, Mich.
- Furnace Controls.**
The Mercoid Corp., Chicago, Ill.
- Furnace Cleaners—Suction.**
Brillion Furnace Co., Brillion, Wis.
National Super Service Co., Toledo, Ohio
Williamson Heater Co., Cincinnati, Ohio
- Furnace Fans.**
A-C Mfg. Co., Pontiac, Ill.
Brundage Co., The, Kalamazoo, Mich.
Heating Systems Corp., Joliet, Ill.
Lakeside Co., Hermansville, Mich.
A. H. Robinson Co., Massillon, Ohio
Warm Air Furnace Fan Co., Watt Mfg. Co., Sterling, Ill.
The, Cleveland, Ohio
Williamson Heater Co., Cincinnati, Ohio
- Furnace Regulators.**
H. M. Sheer Co., Quincy, Ill.
- Furnace Rings.**
Eller Mfg. Co., Canton, Ohio
Forest City-Walworth Run Foundries Co., Cleveland, Ohio
Milwaukee Corrugating Co., Milwaukee, Wis.
- Furnace Switch—Automatic.**
The Mercoid Corp., Chicago, Ill.
- Furnaces—Warm Air.**
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American Furnace Co., St. Louis, Mo.
Brillion Furnace Co., Brillion, Wis.
Emrich Co., C., Columbus, Ohio
Farris Furnace Co., Springfield, Ill.
Forest City-Walworth Run Fdy., Cleveland, Ohio
Fox Furnace Co., Elyria, Ohio
Heating Systems Corp., Joliet, Ill.
Henry Furnace & Fdy. Co., Cleveland, Ohio
Hess Warming & Ventilating Co., Chicago, Ill.
Homer Furnace Co., Coldwater, Mich.
Langenberg Mfg. Co., St. Louis, Mo.
Lennox Furnace Co., Marshalltown, Ia.; Syracuse, N. Y.
Marshall Furnace Co., Marshall, Mich.
Majestic Co., Huntington, Ind.
May Flebeger Furnace Co., Newark, Ohio
Meyer Furnace Co., The, Peoria, Ill.
Midland Furnace Co., Columbus, Ohio
Mt. Vernon Furnace & Mfg. Co., Mt. Vernon, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Premier Warm Air Heater Co., Dowagiac, Mich.
Richardson & Boynton Co., New York, N. Y.
Robinson Co., A. H., Massillon, Ohio
Standard Fdy. & Furnace Co., De Kalb, Ill.
Success Heater Mfg. Co., Des Moines, Ia.
XXth Century Heating & Ventilating Co., Akron, Ohio
Waterman-Waterbury Co., Minneapolis, Minn.
Western Steel Products Co., Duluth, Minn.
Williamson Heater Co., Cincinnati, Ohio
Wise Furnace Co., Akron, Ohio
- Glass—Wire.**
Lupton's Sons Co., David, Philadelphia, Pa.
- Grilles.**
Auer Register Co., Cleveland, Ohio
Harrington & King Perforating Co., Chicago, Ill.
Hart & Cooley Co., New Britain, Conn.
Independent Register & Mfg. Co., Cleveland, Ohio
Tuttle & Bailey Mfg. Co., Chicago, Ill.
- Grilles—Steel Front.**
Tuttle & Bailey Mfg. Co., Chicago, Ill.
- Guards—Machine and Belt.**
Harrington & King Perforating Co., Chicago, Ill.
- Handles—Holler.**
Berger Bros. Co., Philadelphia, Pa.
- Handles—Soldering Iron.**
Hyro Mfg. Co., New York, N. Y.
- Hangers—Eaves Trough.**
Berger Bros. Co., Philadelphia, Pa.
Eller Mfg. Co., Canton, Ohio
Lupton's Sons Co., David, Philadelphia, Pa.
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Waterman-Waterbury Co., Minneapolis, Minn.
- Heaters—Combination Hot Water.**
Alamo Heater Co., Chicago, Ill.
Standard Fdy. & Furnace Co., De Kalb, Ill.
- Heaters—Domestic Hot Water.**
Alamo Heater Co., Chicago, Ill.
Standard Fdy. & Furnace Co., De Kalb, Ill.
- Heaters—School Room.**
Meyer Furnace Co., The, Peoria, Ill.
Waterman-Waterbury Co., Minneapolis, Minn.
- Hotels.**
Fort Shelby Hotel, Detroit, Mich.
- Humidifiers.**
Automatic Humidifier Co., Cedar Falls, Iowa
Diener Mfg. Co., G. W., Chicago, Ill.
Meyer & Bro. Co., F., Peoria, Ill.
Mueller Furnace Co., L. J., Milwaukee, Wis.
Perfect Humidifier Co., St. Louis, Mo.
H. M. Sheer Co., Quincy, Ill.
J. L. Skuttie Mfg. Co., Dowagiac, Mich.
Watt Mfg. Co., Sterling, Ill.
- Lath—Expanding Metal.**
Eller Mfg. Co., Canton, Ohio
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- Machines—Crimping.**
Bertsch & Co., Cambridge City, Ind.
- Machinery—Culvert.**
Bertsch & Co., Cambridge City, Ind.
- Machines—Tin Smith's.**
Bertsch & Co., Cambridge City, Ind.
Dreis & Krump Mfg. Co., Chicago, Ill.
Interstate Machinery Co., Chicago, Ill.
La Salle Machine Works, Chicago, Ill.
Maplewood Machinery Co., Chicago, Ill.
Marshalltown Mfg. Co., Marshalltown, Iowa
Osborn Co., The J. M. & L. A., Cleveland, Ohio
Ryerson & Son, Inc., Jos. T., Chgo., N. Y., St. L., Det., Cleve.
Hyro Mfg. Co., New York, N. Y.
- Metals—Perforated.**
Harrington & King Perforating Co., Chicago, Ill.
- Miters.**
Eller Mfg. Co., Canton, Ohio
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
- Miters—Eaves Trough.**
Barnes Metal Products Co., Chicago, Ill.
Berger Bros. Co., Philadelphia, Pa.
Eller Mfg. Co., Canton, Ohio
Lupton's Sons Co., David, Philadelphia, Pa.
Milwaukee Corrugating Co., Mil., Ch'go, La Crosse, Kan. City
- Nails—Hardened Masonry.**
Parker-Kalon Corp., New York, N. Y.
- Nails—Lead Head.**
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- Oil Burners.**
McIlvaine Burner Corp., Evanston, Ill.
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- Ornaments—Sheet Metal.**
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Gerock Bros. Mfg. Co., St. Louis, Mo.
Miller & Deing, Inc., Brooklyn, N. Y.
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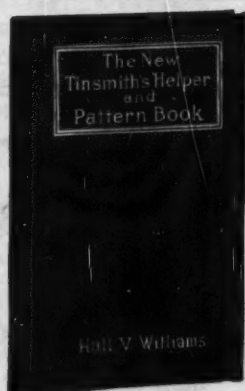
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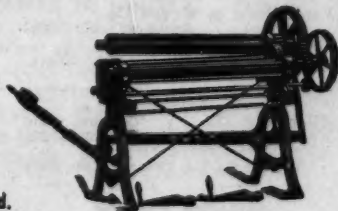
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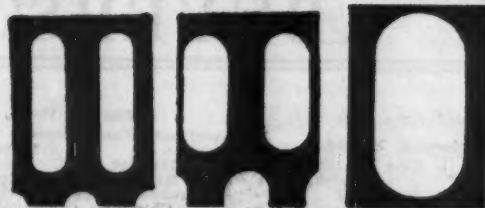
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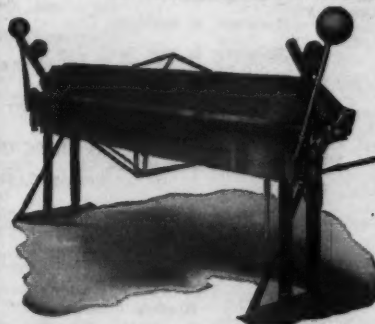


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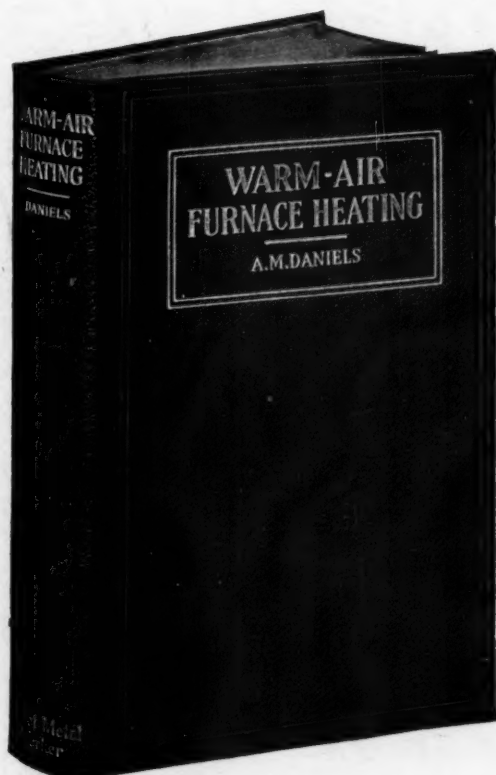


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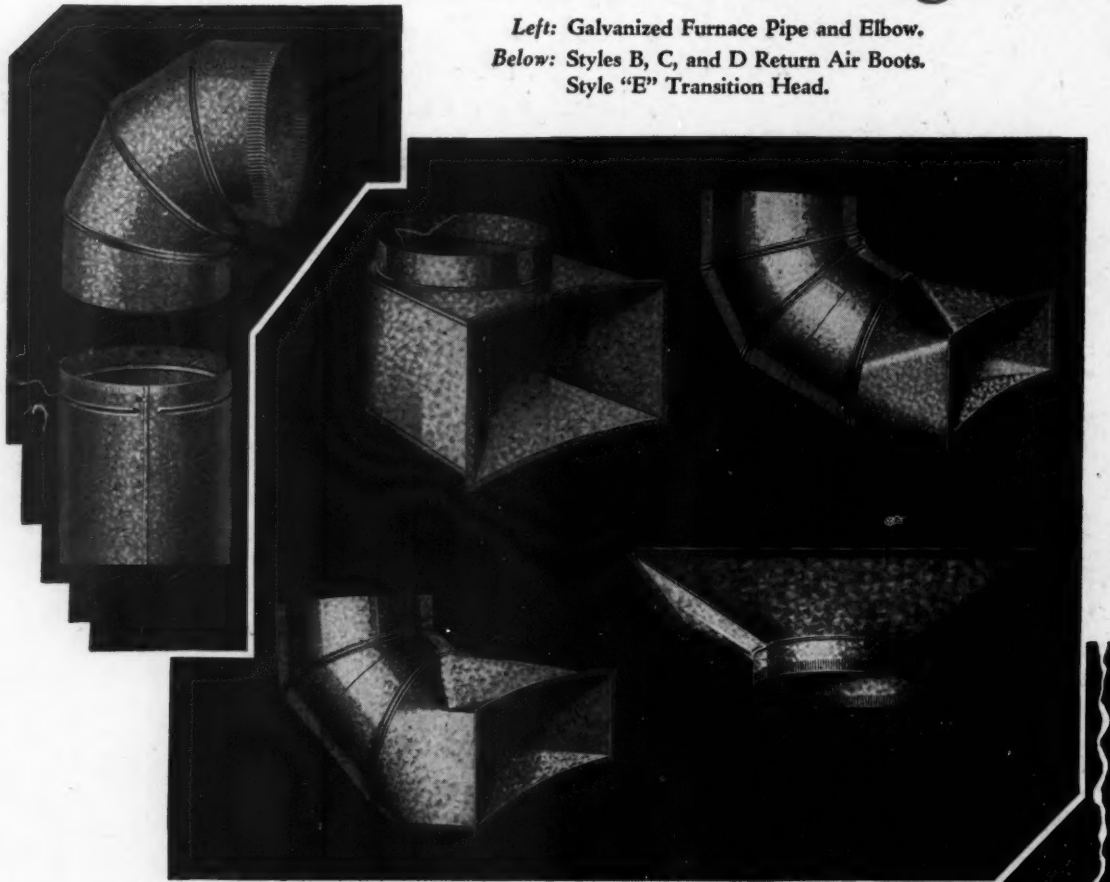
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